

EXPRESSIONS OF EMOTION IN INTERGROUP APOLOGIES AND FORGIVENESS:  
THE MODERATING ROLE OF PERCIEVED PERPETRATOR MORALITY

BY

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### Abstract

Apologies for intergroup harm have become increasingly common. Despite this, the evidence for the effectiveness of intergroup apologies in promoting forgiveness is mixed. One reason for the mixed findings across studies may be that victim groups attempt to infer the emotions perpetrators are experiencing. The emotions perpetrators express may play an important role in communicating the perpetrator group's motivation for apologizing. Three studies investigated how expressions of emotions in an intergroup apology influenced forgiveness of the perpetrator group. The perceived morality of the perpetrator group emerged as an important moderator of the relationship between the emotion expressed in an apology and forgiveness. When the emotion expressed in an apology is inconsistent with the perceived morality of perpetrators, forgiveness decreased. For example, when perpetrators were moral and expressed guilt (consistency between an emotion and morality), forgiveness was higher than when perpetrators were immoral and expressed guilt (inconsistency between emotion and morality). Implications for research and policy concerning when intergroup apologies can promote reconciliation are discussed.

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## Table of Contents

Abstract.....	iii
Acknowledgements.....	iv
List of Tables.....	ix
List of Figures.....	xi
Chapter I: Literature Review.....	1
Apologies and Perpetrators of Harm.....	2
Apologies and Victims of Harm.....	4
Moderators of the Apology-Forgiveness Relationship.....	10
The Current Studies.....	18
Chapter II: Analytic Strategy: Using Structural Equation Modeling with Experimental Designs.....	20
Structural Equation Modeling.....	20
Experimental Designs with Only Categorical Independent Variables.....	25
Multiple Independent Variables.....	30
Effect Sizes.....	35
A Comparison Between SEM and GLM Approaches to Analyzing Experimental Data.....	38
Chapter III: Study 1.....	41
Participants.....	42
Procedure and Materials.....	42
Results.....	43
Manipulation Checks.....	44
Invariance Testing.....	45

Main Effects.....	47
Interactions with Morality.....	46
Discussion.....	49
Chapter IV: Study 2.....	51
Participants.....	51
Procedure and Materials.....	51
Results.....	53
Manipulation Checks.....	55
Invariance Testing.....	56
Main Effects.....	57
Interactions with Morality.....	58
Interactions with American Identification.....	59
Discussion.....	60
Chapter V: Study 3.....	61
Participants.....	62
Procedure and Materials.....	53
Results.....	65
Manipulation Checks.....	68
Invariance Testing.....	69
Main Effects.....	72
Interactions.....	73
Mediation Analysis.....	78
Discussion.....	79

Chapter VI: General Discussion.....	85
Differences among Studies.....	88
Implications for Policy.....	92
Limitations and Future Directions.....	92
Conclusions.....	95
Notes.....	96
References.....	99
Appendix A: Sample <i>Mplus</i> scripts.....	110
Appendix B: Materials used in Studies 1, 2, and 3.....	113



## List of Tables

1. Example dummy coding scheme.....	26
2. Study 1: Means, standard deviations and test statistics for manipulation checks.....	44
3. Study 1: Correlations among the manipulation checks.....	45
4. Study 1: Invariance testing of independent and dependent variables.....	47
5. Study 1: Means and test statistics for dependent and independent variables....	47
6. Study 2: Means, standard deviations and test statistics for manipulation checks.....	55
7. Study 2: Correlations among the manipulation checks.....	56
8. Study 2: Invariance testing of independent and dependent variables.....	57
9. Study 2: Means and test statistics for dependent and independent variables....	57
10. Study 3: Emotion manipulation checks.....	69
11. Study 3: Invariance across emotion conditions.....	70
12. Study 3: Invariance across morality conditions.....	71
13. Study 3: Means and test statistics for dependent variables across emotion condition.....	72
14. Study 3: Means and test statistics for dependent variables across morality condition.....	73
15. Study 3: Simple intercepts and slopes of morality for the emotion condition by morality by identification interaction on forgiveness.....	76
16. Study 3: Simple intercepts and slopes of morality for the emotion condition by morality by identification interaction on respect.....	77
17. Study 3: Simple intercepts and slopes of morality for the emotion by morality by identification interaction on expectancies.....	78

18. Study 3: Bootstrap confidence intervals for the indirect effect of respect on the relationship between morality and forgiveness at different levels of emotion condition and identification.....	79
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## List of Figures

1. Example of three methods of scale setting for latent variables..... 24
2. Study 1: Interaction between morality and condition on forgiveness.....49
3. Study 2: Interaction between morality and condition on forgiveness.....59

## CHAPTER I: Literature Review

History is rife with examples of one group harming another (Barkan, 2000). Intergroup harm has occurred around the globe and can be substantial—including harm doing such as genocide, colonization, slavery, and ongoing intergroup inequality. After harming another group, the perpetrators of harm will sometimes attempt reconciliation with the victim group through reparative actions such as apology (De Greiff, 2006). Intergroup apologies can have positive consequences for both victims and perpetrators (Allan, Allan, Kaminer, & Stein, 2006; Blatz & Philpot, 2010; Maitner, Mackie & Smith, 2006; Tutu, 1999). Indeed, apologies can represent the initial steps toward forgiveness and intergroup reconciliation (Branscombe & Cronin, 2010).

Over the past three decades intergroup apologies have become increasingly common as perpetrators of harm look to reconcile with victims. For example, in the 1980s, the United States Congress officially apologized for the internment of Japanese citizens during World War II and paid reparations to all survivors of the internment camps (Barkan, 2000). In Northern Ireland, the IRA has apologized for some of the events they perpetrated during the time known as “the troubles” (IRA apology, 2002). The Canadian government apologized for a head tax on Chinese individuals entering Canada, which was designed to discourage Chinese immigration (Government of Canada, 2006). In 2008, the Australian Prime Minister, on behalf of the government, apologized for the past treatment of Indigenous peoples (CNN Asia, February 2008) and in 2009, the United States government apologized for its role in the enslavement of African-Americans (CNN Politics, June 2009). With the increased frequency of intergroup apologies, the antecedents and consequences of intergroup apology have become fertile grounds for researchers in social psychology (e.g., Blatz & Philpot, 2010; Schoemann & Branscombe, in prep.).

Research on intergroup apologies has considered factors that motivate perpetrator groups to issue apologies and how victim groups respond to apologies from the perpetrator group. In this paper I will attempt to bridge these two areas by investigating how *the emotional content* of an intergroup apology—information about the perpetrator groups’ motivation for making the apology affects victim groups’ forgiveness of perpetrators.

### **Apologies and Perpetrators of Harm**

What purposes do apologies serve? Apologies are painful, self-punishing gestures but they serve several purposes for the victim and perpetrator of harm. Tavuchis (1991) argues that for perpetrators the main goal of an apology is to restore claim to membership within the moral community. By apologizing, perpetrators may once again be seen as moral actors and the apology may serve to restore order in the moral community. For groups that have been perpetrators of harm, their actions threaten their identity as a moral group, and this identity threat can motivate the group to apologize (Branscombe & Cronin, 2010). When an apology is issued and accepted by the victim group, the perpetrator group’s moral credentials are restored. The apology can also lead to forgiveness by the victim group, further enhancing the moral credentials of the perpetrator group and, ideally, reducing the chances of further conflict between groups.

Despite the potential benefits, only a small percentage of ingroup harm doing has resulted in apologies by perpetrator groups. Instead, perpetrator groups are more likely to deny or legitimize their harm doing rather than attempt to apologize or make reparations for it. What drives a perpetrator group to apologize? Often, despite the potential psychological and intergroup benefits, apologies are not perceived as being in the perpetrator group’s interests (Branscombe, Doosje, & McGarty, 2002). Although apologies do not have financial costs to perpetrators, they can cost perpetrators in terms of their reputation or image. An important antecedent that may

motivate perpetrator groups to engage in reparative actions is the kind and degree of emotion that perpetrator group members feel about their harm doing.

Three self-conscious emotions have been linked to perpetrator groups' desire to apologize for past harm: guilt, shame, and anger. In a meta-analysis, Schoemann and Branscombe (in prep.) found that guilt, shame, and anger about the intergroup harm committed are all positively related to support for reparative actions. Guilt and shame were more strongly related to support for reparative actions than was anger and this difference between emotions was strongest for symbolic reparative actions, such as apologies. Self-conscious emotions are emotions where the self or ingroup are the referent (Tangney, 1995) and in the case of intergroup harm they are focused on the harm done by the ingroup. In a review of the role of emotions in social change, Thomas and colleagues (2009) suggested that a fourth emotion, sympathy, may also motivate apologies by perpetrator groups. Sympathy is an other-focused emotion and in the case of intergroup harm is focused on the suffering sustained by the victims, not on the actions of the perpetrators of harm. In intergroup situations feelings of sympathy toward outgroup members can motivate helping at the individual (Batson et al., 2003) and group levels (Harth, Kessler, & Leach, 2008). Sympathy has not been empirically linked to supporting apologies in intergroup contexts; however, it has been linked to willingness to support other symbolic actions (Harth, Kessler, & Leach, 2008) towards victim groups. Issuing an apology is an important first step in repairing past harm and how the apology is received by victim groups will determine whether the process of reconciliation continues (Tutu, 1998). If victim groups accept the apology and forgive perpetrators then perpetrators feel more positive emotions towards the victim group. However, if the victim group rejects a perpetrator group's apology the perpetrators feel anger towards the

victim group and the perpetrator group is likely to harm the victim groups again (Harth, Hornsey, & Barlow, 2011).

### **Apologies and Victims of Harm**

The purposes of an apology for victim groups are more complex than for perpetrator groups. Lazare (2004) theorized that apologies have beneficial effects for victims: apologies restore power and dignity to victims, they confirm the idea that perpetrator groups believe in norms of justice, and they show that the perpetrator group has also suffered. Perpetrator suffering can involve feeling negative emotions such as guilt or shame, which are threats to their moral image (Shnabel & Nadler, 2008). Similarly, Thompson (2008) claimed that intergroup apologies restore power and dignity to the victim group, and De Greiff (2006) argued that the primary goal of intergroup apologies is to restore victim groups' beliefs that social institutions are trustworthy. All of these functions of an apology (e.g., restoring power and dignity to victims) can make the victim group more likely to forgive the perpetrators of harm. For example, if victim group members see the perpetrator group as just, then victim groups may be more likely to forgive perpetrator groups.

It is important to note that apologies can have negative implications for victim groups. Victim groups may feel pressured to publically accept an apology even when the victim group has not forgiven the perpetrators of harm. Furthermore, if a victim group rejects an apology from the perpetrator group, the perpetrator group feels anger toward the victim group (Harth et al., 2011). Thus, rejecting an apology could result in further harm and oppression being directed toward the victim group. In addition, accepting an apology may reduce the victim group's motivation to undertake collective action to achieve social change (Branscombe & Cronin, 2010).

The exact processes that move groups from victims of harm to forgiving perpetrators remain an empirical question. Wohl, Hornsey, and Philpot (in press b) introduced a staircase model of intergroup apologies that integrates victim and perpetrator group actions into one model demonstrating how intergroup relations can move from harm doing to forgiveness and reconciliation in five steps. It is important to note that moving from one step to the next is not a foregone conclusion and obstacles to forgiveness exist at each step. In addition, forgiveness in this context is almost always collective forgiveness; harm occurred in the past and current members of the perpetrator group (who are being forgiven) have not directly harmed the victim group. The first step is for the perpetrator group to accept collective guilt for its actions toward the victim group. The second step is for the perpetrator and victim groups to agree on the record of history. Both groups must come to a consensus on what occurred in the past. Memories of a group's past actions can be affected by group membership and identification with the group (Sahdra & Ross, 2007); agreement about each group's past actions is not assured. One way to accomplish this step is to keep perpetrators from strategically shifting their standards of injustice (Miron & Branscombe, 2008). Individuals use standards of injustice to define what is and is not an injustice. Members of perpetrator groups with high standards of injustice are less likely to define harm doing as unjust and are less likely to view past harm as severe (Miron, Branscombe, & Biernat, 2010). Categorizing victims and perpetrators as part of the same overarching group can lower standards of injustice (Miron & Branscombe, 2008) and increase the likelihood that both groups will reach a consensus about what occurred in the past.

The third step is discussing reparations. Wohl and colleagues (in press b) suggest that by discussing reparations the perpetrator group expresses remorse for their actions and sets the stage for forgiveness. An important component in discussing reparations is matching the needs of the



victim group to the reparations offered. Some victim groups may not desire monetary reparations, viewing reparations as “blood money” and instead may prefer an apology or some other form of symbolic reparations (Lutz, 1995). Only when the victim and perpetrator groups can agree on appropriate reparations, can they move on to the fourth step. The fourth step is issuing an intergroup apology. In this step the perpetrator group issues an apology that takes responsibility for its actions and restores dignity to the victim group. For an apology to be effective, it must meet the needs of both the perpetrator and the victim groups. The apology should improve the perpetrator group’s moral standing in the eyes of others and simultaneously restore power and dignity to the victim group. The fifth and final step is post apology engagement — victim and perpetrators interact and begin to view each other as part of shared humanity. The fifth step is crucial, as viewing perpetrators of harm as part of a shared human community can lead to forgiveness (Wohl & Branscombe, 2005). In this research, I will examine the period between of the fourth and fifth steps, after an apology has been issued but before engagement and forgiveness have taken place.

**Outcomes from apologies.** An apology by a perpetrator group can have many possible outcomes for victim groups. The best possible outcome for an apology is that it results in the victim group forgiving the perpetrators for their past harm, which in turn may result in reconciliation between the groups and positive intergroup relations. I will call this possibility the *immediate forgiveness outcome*. Intuitively, this is the most appealing outcome. If an apology elicits forgiveness directly, then injuries are healed, the past is dealt with, and relations between groups improve. Unfortunately, immediate forgiveness following an apology may not be so likely to occur. The immediate forgiveness outcome has been tested experimentally and the results have been mixed: some studies have found a relationship between an apology and

forgiveness whereas other studies have failed to find this relationship. Philpot and Hornsey (2008) investigated Australians' levels of forgiveness following an apology and found that apology did not increase forgiveness. The apologies examined in this research also included a promise of compensation for the victims of harm. In the situations investigated (e.g., East German drug use in sports from 1974 to 1989; Saudi financial support of Al Qaeda), an offer of compensation may have insulted the victim group and prevented forgiveness from occurring. Perhaps a simple apology without a promise of compensation would have led to greater forgiveness in these situations. In contrast, Brown and colleagues (2008) found that an apology by the United States government about a friendly fire incident increased Canadian participants' forgiveness of the United States. In this research, the apology ostensibly issued by the American government did not include an offer of compensation. With an offer of compensation absent, the apology offered may not have insulted the victims of harm. Nevertheless, there are other possible reasons for the different results found in these two sets of studies, but one important reason may be whether compensation is offered or not as part of the apology. Another reason for these different effects might be the context in which the apology was issued. Immediate forgiveness following an apology may occur when many of the other antecedents of forgiveness have already been satisfied. For example, when harm is not perceived to be severe, victim and perpetrator groups are of equal status, and the perpetrator group is already perceived positively by the victim group (as was the case in Brown, Wohl, & Exline, 2008a) then forgiveness may immediately follow an apology. In contrast when harm is distant, victim and perpetrator groups are not of equal status, or the perpetrator group is perceived negatively by the victim group (as was the case in Philpot & Hornsey, 2008) then forgiveness may not immediately follow an apology. The

conflicts I investigate in this paper meet the criteria for immediate forgiveness and provide a venue for forgiveness following an apology.

In other cases, an apology may not result in immediate forgiveness but the apology may promote positive feelings about the perpetrator group and perhaps in the future such positive feelings may lead to forgiveness. I will call this possibility the *delayed forgiveness outcome*. There are many possible mediators of the apology-forgiveness relationship that could lead to the delayed forgiveness outcome. Philpot and Hornsey (2011) investigated one such mediator—victim groups' perception of the remorse perpetrator groups seemingly experienced. Australian, Malaysian, and Filipino participants who recalled that the Japanese had apologized for atrocities it committed in World War II believed that the Japanese felt more remorse for these actions. This effect occurred whether or not participants actually read about an apology. Participants who believed that the Japanese felt more remorse for their actions also were more likely to forgive the Japanese for these past actions.

Another mediator of the apology-forgiveness relationship may be the emotions that victims experience. Leonard, Mackie, and Smith (2011) found that the emotion of respect mediated the relationship between apology and forgiveness. An apology increased feelings of respect towards the perpetrator group, which in turn predicted greater forgiveness of perpetrators. They also discovered another positive outcome of apology, an apology decreased victim groups' desire for retribution. There are likely many more mediators of the relationship between apology and forgiveness. Thus, in some cases, even if an apology does not result in immediate forgiveness, the goodwill engendered by an apology can encourage forgiveness in the future.

A third, and less positive, outcome of an apology is that the victim group will ignore the apology and there will be no change in their feelings towards the perpetrator group. In this case,

forgiveness and reconciliation following the apology are not increased. I will call this possibility the *no forgiveness outcome*. Philpot and Hornsey (2008) found no change in participants' level of forgiveness following an apology. In one study they used a longitudinal design to assess changes in forgiveness following an apology. They measured victims' forgiveness immediately after reading about an apology and one week later. The apology did not increase forgiveness immediately or one week later. One possibility is that the one week interval was not long enough for feelings of forgiveness to develop. However, this study provides some evidence that not all apologies result in forgiveness either immediately or over a short time interval.

The final possible outcome of an apology is for the apology to be viewed as insincere or a token gesture by the victim group. In such cases, an apology may worsen relations between the victim and perpetrator groups and decrease the likelihood of forgiveness and reconciliation. I will call this possibility the *reduced forgiveness outcome*. While there has not been any empirical research on the reduced forgiveness outcome for apologies, research concerned with intergroup helping can shed some light on the processes that might be at work. Intergroup helping research has focused on two types of helping—autonomy-oriented helping and dependency-oriented helping (Nadler, 2002). Autonomy-oriented help is temporary, involves providing a partial solution to the problem, and communicates the helper's view that the recipients can help themselves with tools and knowledge. Dependency-oriented help involves providing a full solution to a problem, and it communicates to recipients that they are perceived as unable to help themselves. When status relations between groups are unstable, dependency-oriented help results in the recipients feeling more negative emotions and more negative evaluations of the group offering help (Nadler & Halabi, 2006). It is easy to imagine situations where an apology would have similar effects. An apology could elicit negative emotions when a perpetrator group offers

an apology that does not satisfy the victim group's needs, which Lazare (2004) identified as: restoring power and dignity to victims, confirming the idea that the perpetrator group believes in norms of justice, and showing that the perpetrator group has suffered. Giner-Sorolla and colleagues (2008) found that an apology accompanied by reparations elicited feelings of insult from members of victim groups unless the apology and reparations were accompanied by the perpetrator group abasing themselves and feeling shame. In the context used by Giner-Sorolla et al. (2008), a company was responsible for a chemical spill and the president of the company apologized. The apology and reparations (in the form of cleaning up the chemical spill) offered were pro forma and did not confirm the idea that the perpetrator group believes in norms of justice, or show that the perpetrator group has suffered.

The range of possible responses to apology by the victim group brings up an important question. What factors influence victim groups to respond to apology in a specific way? In the preceding section I have discussed some of these factors (e.g., the content of an apology or the relationship between perpetrator and victim groups) but there are a variety of possible moderators of the apology-forgiveness relationship that should be considered.

### **Moderators of the Apology-Forgiveness Relationship**

Identifying factors that moderate responses to apology is important for determining when and how intergroup apologies will be most effective. Blatz and Philpot (2010) proposed four classes of moderators that might affect responses to apologies: offense characteristics, apology characteristics, intergroup relationship characteristics, and intragroup relationship characteristics. Offense characteristics are features of intergroup harm and can include the time since harm, the severity of harm, and intentionality of harm. Apology characteristics are features of the apology itself and include the cost of the apology and the time since the apology occurred. Intergroup

relationship characteristics are features of the intergroup climate and include trust between groups and power or status differences between groups. Finally, intragroup relationship characteristics are features of the intragroup context, of either the victim or perpetrator group, such as members' levels of group identification. In this paper I will consider two possible moderators: emotion expressed in an apology (an apology characteristic moderator) and the perceived morality of the perpetrator group (an intergroup relationship characteristic moderator).

**Expressing emotions in an apology.** Given the critical role that group emotions play in eliciting apologies from perpetrators, it is probable that expressing emotion in an apology will affect victim responses to the apology. By expressing an emotion, perpetrators can communicate their internal psychological state to victims and provide victims a window into the factors that motivated the apology. Furthermore, expressing emotions is a way for perpetrator groups to take responsibility for harm doing and express their contrition, both keys to moving from an apology to forgiveness.

There has been little research in the intergroup context on how expressing specific emotions in an apology affects forgiveness of perpetrators of harm. Philpot and Hornsey (2008) found that the emotionality of an apology did not affect victims' willingness to forgive perpetrators. However, the emotional apology used in their studies did not focus on a specific emotion; rather the emotional apology included general negative emotion about perpetrator actions. Individual emotions can communicate different information about what the perpetrator group is feeling and they can influence victims' responses to apologies.

Giner-Sorolla and colleagues (2008) investigated how perpetrator expressions of guilt or shame accompanying an apology and reparations influenced responses to the apology. They found that when perpetrators expressed shame and abased themselves, an apology accompanied

by reparations was less insulting than when perpetrators expressed guilt. However, there are several limitations to their study, some of which I will address in this paper. Emotions expressed by a member of the perpetrator group were not expressed as part of the apology; instead, participants read about the mental state of the member of the perpetrator group and then read an apology from that group member. Unfortunately, victim groups do not have access to the inner psychological processes of members of the perpetrator groups. Instead, victim groups must rely on statements by the perpetrator group to infer mental states. A second limitation is that apology was always accompanied by reparations in their research. Apologies and reparations represent two different types of reparative actions, symbolic and concrete reparative actions. These two types of reparative action have different antecedents (Schoemann & Branscombe, in prep) and can result in different psychological outcomes. Finally, and most importantly, in these studies shame was confounded with self-abasement. The description for shame read:

“...feels that he is a complete failure and that he is a person unable to run a company or do anything worthwhile. He feels ashamed about the unfortunate accident.” (Giner-Sorolla et al., 2008, p. 521)

and the description for guilt read:

“...feels very sorry about what happened and regrets that he had not taken more security measures to prevent it. He feels guilty about the unfortunate accident.” (Giner-Sorolla et al., 2008, p. 521).

From these manipulations it is unclear whether differences between the shame and guilt condition were due to differences in the emotion expressed or if differences were due to differences in self-abasement. It is likely that an apology and reparations from a member of the perpetrator group who is feeling guilt and self-abases him or herself would be viewed as similar to the shame condition in the study by Giner-Sorolla and colleagues (2008).

Wohl, Hornsey, and Bennett (in press) investigated how expressing different emotions in an apology can communicate information about the humanity of the perpetrator group. They found that the perceived humanity of the perpetrator group played a key role in the apology-forgiveness relationship. The more humanity that victims ascribed to the perpetrator group the more the perpetrator group was forgiven. The emotions that perpetrators express in an apology can demonstrate their humanity, or lack thereof. One type of emotions, *secondary emotions* (e.g., shame, contentment), are perceived to be unique to humans, whereas another type of emotions, *primary emotions* (e.g., fear, happiness), are perceived to be shared with animals (Leyens et al., 2000). Individuals are more likely to attribute primary emotions to outgroups than to ingroups, and individuals are more likely to attribute secondary emotions to ingroups than to outgroups (Leyens, et al., 2001). When perpetrators expressed primary emotions in an apology, the emotion decreased the perceived humanity of the perpetrator group and this lead to less forgiveness. When perpetrators expressed secondary emotions in an apology, the emotion could increase the perceived humanity of the perpetrators and thereby increase forgiveness. However, expressing secondary emotion in an apology only increased forgiveness when the perpetrator group was already perceived to be human.

In this paper I extend research on emotions and apology by considering four different emotions that can elicit and accompany apologies from perpetrators: guilt, shame, anger, and sympathy. I will focus on two qualities of these emotions, self versus other focus and the antecedents of each emotion. Unlike Wohl and colleagues (in press a) I will focus mostly on secondary emotions (guilt, shame, and sympathy) and will investigate only one primary emotion (anger). I hypothesize that differences in the qualities associated with these emotions will result in differential forgiveness from victims of harm. The emotions can be broken down into two



main categories, self-focused emotions (guilt, shame, anger) and other-focused emotions (sympathy). For self-focused emotions, the emotion is directed at the actions of the perpetrator group. These are negative emotions that are aversive and stem from awareness of the perpetrator group's actions. By expressing a self-focused emotion in an apology, perpetrator groups acknowledge that they are responsible for harm and communicate that they have suffered—by experiencing such negative emotions themselves—due to their harm doing. Both acknowledging responsibility for harm and communicating suffering are important components of an apology that may result in forgiveness. Other-focused emotions are also aversive emotions but they stem from awareness of the suffering experienced by the other group and are not related per se to the actions of the perpetrator group. When a perpetrator group expresses an other-focused emotion in an apology the perpetrator group is unlikely to be seen as acknowledging its role in the harm; instead the perpetrator group may appear to pity the victim group. In research on interpersonal apologies, expressions of sympathy in an apology do not result in forgiveness (Fehr & Gelfand, 2010). Thus, I hypothesize that apologies that contain a self-focused emotion will result in greater forgiveness among victim group members than apologies that contain an other-focused emotion.

There may also be differences in how the various self-focused emotions are perceived in an apology. The three self-focused emotions I am investigating all have different antecedents that may affect victim responses to apology. Guilt stems from an appraisal of having unjustly harmed another or having violated a moral standard (Devine, Monteith, Zuwerink, & Elliot, 1991; Tangney, 1995; Wicker, Payne, & Morgan, 1983). At the intergroup level, guilt stems from actions in which one's group has unjustly harmed another group, violated some moral standard, or illegitimately benefited from an outgroup's disadvantage (Branscombe, 2004;

Miron, Branscombe, & Schmitt, 2006; Powell, Branscombe, & Schmitt, 2005). Shame stems from a global negative evaluation of the self (Tangney, 1995; Wicker et al., 1983). Shame at the individual or group level focuses on how a negative behavior reflects on the entire self or group (Brown, Gonzalez, Zagefka, Manzi, & Cehajic, 2008b; Lickel, Schmader, Curtis, Scarnier, & Ames, 2005; Tangney, 1995). Anger stems from an appraisal that an individual or group is responsible for a transgression against oneself, one's group, or a third party (Frijda, Kuipers, & ter Schure, 1989; Smith & Ellsworth, 1985). The target of anger is generally an external actor, either another person or an outgroup, however, under some circumstances, the self or ingroup, can be the target of anger (Leach, Iyer, Pederson, 2006; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Self-focused anger comes from appraising one's own or one's group's actions toward another as unfair (Leach et al., 2006, Tangney et al., 1996).

The antecedents of self-focused emotions provide a framework for predicting how victim groups will respond to perpetrator groups expressing each emotion in an apology. Guilt is focused on the moral violation by the ingroup and communicates that the perpetrator group believes in norms of justice. Shame is focused on the negative evaluation of the ingroup and communicates that the perpetrator group believes they are "bad," which may lessen insult from the apology (Giner-Sorolla, 2008). If shame is due to the harm experienced by the victim group then shame may also communicate that the perpetrator group believes in norms of justice. Anger is focused on the unfairness of the perpetrator group's actions. This may communicate that the perpetrator group is aware that it is responsible for unfairness and thus has committed a moral violation and believes in norms of justice. To the extent that each self-focused emotion communicates the same message to victim groups—the perpetrators are responsible for their harm doing and believe in the norms of justice—there may be no differences among self-focused

emotions when expressed as part of an apology. However, guilt is most specifically focused on the moral violation of the perpetrator group and expressing guilt in an apology may result in greater forgiveness than shame or anger, which are not specifically focused on the moral violation. Shame is not focused on the perpetrator group's specific actions and shame may not communicate that the perpetrators have committed moral violations. Thus, expressing shame in an apology may result in less forgiveness than guilt or anger, which are focused on the perpetrators specific harm doing. Finally, anger is a primary emotion (unlike guilt and shame, which are secondary emotions), and expressing a primary emotion in an apology can decrease forgiveness (Wohl et al., in press a).

**Morality of the perpetrator group.** Whether the perpetrator group is perceived as moral or not could also moderate the relationship between apology and forgiveness. Morality has several characteristics that make it an important potential moderator of the relation between apology and forgiveness. According to Durkheim (1915), morality binds individuals together into a community based on shared norms. At the group level, morality may bind groups into a shared category, and when victims and perpetrators share category membership (e.g., categorizing at the human level) then victims are more likely to forgive perpetrators of harm (Wohl & Branscombe, 2005).

Perceiving perpetrator groups as moral has other possible benefits. Perpetrator groups have, by definition, committed a moral violation in the past by harming victim groups. By apologizing, perpetrator groups are asking victim groups to restore them to the moral community, and forgiveness by victims completes this process. Thus, before accepting an apology and forgiving a perpetrator group, the victim group must see the perpetrator group as moral. Research on intergroup morality has mostly focused on ingroup members' perceptions of

the ingroup as moral (e.g., Leach, Ellemers, & Barreto, 2007). However, research investigating person perception provides some evidence for the importance of morality when judging other individuals or groups. Morality communicates important information about an individual's potential behavior and is an important component of person perception (Wojciszke, 2005). A moral individual will behave in a manner that benefits others, whereas an immoral individual will behave in a manner that harms others. Morality is also an important factor in evaluating leaders of groups (Wojciszke & Klusek, 1996) and morality is heavily relied upon when making judgments of individuals or groups (Brambilla, Rusconi, Sacchi, & Cherubini, 2011a; Brambilla, Sacchi, Rusconi, Cherubini, & Yzerbyt, 2011b).

In intergroup contexts, the morality of an outgroup communicates information about the outgroup's likely future behavior. An immoral outgroup is perceived as more threatening to the ingroup than is a moral outgroup and is evaluated more negatively (Brambilla et al., 2011a). If the victim group believes that the perpetrator group is still a threat to the ingroup, then the perpetrator group is unlikely to be forgiven for its past action. Perpetrator groups that are viewed as moral can be forgiven because they do not constitute a threat to the victim group. Perpetrator groups that are not viewed as moral may not be forgiven because they may be seen as a threat to the victim group in the future. An apology from a perpetrator group may moderate the effect of its perceived morality on forgiveness. When a perpetrator group apologizes and is perceived as moral, the perpetrator groups has taken responsibility for its actions and the victim group does not feel threatened by the perpetrator group. In this situation the victim group can feel safe interacting with the perpetrator group. If victim groups feel safe with perpetrator groups then victims may recategorize perpetrator and victims into a superordinate group, which makes forgiveness more likely (Wohl & Branscombe, 2005). When a perpetrator group apologizes and

is perceived as immoral, the perpetrator group has taken responsibility for its actions but the victim group still feels threatened by the immoral perpetrator group. In this situation the victim group is unlikely to feel safe interacting with the perpetrator group. If victim groups do not feel safe with the perpetrator group, then the victims will not recategorize perpetrator and victims in to a superordinate group, which makes forgiveness unlikely (Wohl & Branscombe, 2005).

Perpetrator group morality also is likely to communicate information about the humanity of the perpetrator group. Victims' perceptions concerning the humanity of the perpetrator group are important for forgiving perpetrators (Wohl et al., in press a). If members of the victim group believe that moral behavior is uniquely human, then perceiving the perpetrators as moral will result in victims perceiving the perpetrators as human as opposed to perceiving perpetrators as inhuman. When perpetrators are perceived to be human, expressing secondary emotions in an apology can increase forgiveness (Wohl et al., in press a). I hypothesize that morality will be positively related to forgiveness and this relationship will be stronger when an apology containing a secondary emotion is issued.

### **The Current Studies**

In this paper I investigate the effects of expressing specific emotions as part of an apology and the effect of perceived morality on forgiveness of the perpetrators of past harm. I investigate these questions across three studies. In all three studies, a perpetrator group apologizes to a victim group and I manipulate the emotion expressed in the apology. Members of the victim group read about a perpetrator group harming their group and read one of four apologies expressing guilt, shame, anger, or sympathy or participants do not read an apology. In the first two studies the perceived morality of the perpetrator group was measured and used as a continuous independent variable. In the third study the morality of the perpetrator group was

manipulated. The three studies encompass three types of conflict, conflict in a minimal group situation (perpetrator group: Group X, victim group: Group Y), historical harm doing (perpetrator group: Japan, victim group: The United States of America), and present day harm doing (perpetrator groups: Democrats or Republicans, victim groups: Republicans or Democrats). Across all three studies I hypothesize that expressing a self-focused emotion in an apology will result in more forgiveness than expressing an other-focused emotion or not apologizing. I also hypothesize that the more moral a perpetrator group is perceived to be, the more the group will be forgiven. Finally, I hypothesize that the effect of morality on forgiveness will be strongest when perpetrators express a self-focused emotion, such as guilt or shame, in their apology.

I will investigate these questions using Structural Equation Modeling (SEM). SEM has rarely been used to analyze experimental data in social psychology, despite the many benefits of the technique. In the next chapter I discuss the basics of SEM and how it can be applied to experimental data.

## CHAPTER II: Analytic Strategy: Using Structural Equation Modeling with Experimental Designs

Over the last two decades Structural Equation Modeling (SEM) has become a popular data analysis tool for social psychological researchers. However, SEM has rarely been used by social psychologists to analyze data from experimental designs. When analyzing data from experimental designs, researchers in social psychology have traditionally utilized data analytic techniques based on the General Linear Model (GLM), such as Analysis of Variance (ANOVA) and multiple linear regression (MLR). All of these techniques are special cases of SEM (Graham, 2008). In this chapter I will discuss the relationship between SEM and GLM, how experimental designs can be analyzed with SEM, and the advantages of using SEM with experimental designs.

### **Structural Equation Modeling**

SEM is a multivariate data analysis technique that can be used to investigate relationships among latent and manifest variables. Latent variables are abstract concepts, such as “forgiveness,” that are unable to be measured directly. Latent variables are measured by multiple manifest variables that each tap into the latent construct. As a result, SEM allows researchers to correct for measurement error in each manifest variable. SEM is a very flexible technique and many statistical techniques, including factor analysis, MLR, and ANOVA, are special cases of SEM.

In SEM the researcher attempts to replicate the covariance among measured variables in a sample covariance matrix with a model. Using the LISREL model (Jöreskog, 1969) the model-implied covariance matrix is defined by four parameter matrices:  $\Lambda$  is a matrix of factor loadings,  $\Theta_\epsilon$  is a covariance matrix of the residuals associated with indicator variables,  $\Psi$  is a covariance

matrix of latent variables, and  $\mathbf{B}$  is a matrix of structural relations among latent variables<sup>1</sup>. The covariance structure implied by the model is:

$$\Sigma = \Lambda(\mathbf{I} - \mathbf{B})^{-1}(\Psi)(\mathbf{I} - \mathbf{B})^{-1'}\Lambda' + \Theta_{\varepsilon} \quad \text{EQ 1}$$

There is also a mean structure in SEM, represented by two vectors:  $\alpha$ , the latent means and  $\tau$ , the item intercepts. The mean structure implied by the model ( $\mu$ ) is:

$$\mu = \tau + \Lambda\alpha \quad \text{EQ 2}$$

The model implied mean and covariance structures are then estimated as a function of model parameters using a discrepancy function such as maximum likelihood (ML) or weighted least squares (WLS). The difference between the model implied mean and covariance structure and the sample mean and covariance structure is a measurement of how well the model fits the data.

The closeness of fit of the estimated model to the observed data is evaluated through several goodness-of-fit indices. There are many goodness-of-fit indices. In this paper I will focus on the following goodness of fit indices: (a) chi-square statistic ( $\chi^2$ ), (b) root mean square error of approximation (RMSEA; Steiger, 1990), (c) comparative fit index (CFI; Bentler, 1990), and (d) standardized root mean square residual (SRMR; Jöreskog & Sörbom, 1996).

The  $\chi^2$  statistic is of limited usefulness because it reflects the sample size and tests a hypothesis of perfect fit. For large sample sizes,  $\chi^2$  will nearly always be large and significant, signaling a poor model fit; the reverse is true for small sample sizes. In addition, models are approximations of effects and are not exact reproductions of processes in the population. Thus, testing a null hypothesis that the model perfectly fits the data is misguided. MacCallum and Austin (2000) put it best when they noted “all models are wrong to some degree, even in the population” (p. 218). The  $\chi^2$  statistic has one very useful property; it can be used to compare two nested models. Nested models are two models such that if some parameters in one model were



constrained the two models would be identical. For example, imagine a simple model with two manifest variables. In one model, the variance of each variable is estimated, as is the covariance between them. In a second model only the variance of each variable is estimated, but the covariance is fixed to zero. In this case the second model is nested in the first model. The fit of the models can be compared using each model's  $\chi^2$  statistic (also called the nested model test or chi-square difference test). When run on the same data, the difference between two nested models'  $\chi^2$  statistics is distributed as  $\chi^2$ , with degrees of freedom equal to the difference in the models' degrees of freedom (Steiger, Shapiro, & Browne, 1985). The nested model test is a powerful tool that plays an important role in the analysis of experimental data with SEM. However, the nested model test is only accurate when the models being tested are correctly specified and fit well (Steiger, Shapiro, & Browne, 1985). Like the  $\chi^2$  test of model fit, the nested model test is sensitive to sample size. Larger sample sizes are more likely to result in significant nested model tests. However, the nested model test is of greater usefulness than the  $\chi^2$  test of model fit because it tests a null hypothesis focused on one or more parameters, rather than a null hypothesis of perfect model fit.

In this paper, when evaluating model fit greater consideration was given to fit indices other than  $\chi^2$ . The RMSEA is an index of absolute model fit. It indicates the amount of misfit per degree of freedom, with smaller values indicating better model fit. Values greater than .10 indicate poor fit, values .08 to .10 indicate mediocre fit, values .05 to .08 indicate acceptable fit, values less than .05 indicate close fit, and a value of .00 indicates exact fit (Browne & Cudeck, 1993). The CFI indicates the relative improvement in model fit over a "null" model, which assumes that all covariances or correlations in the model are zero. For the CFI, values of .90 to .95 indicate acceptable model fit, values of .95 to .99 indicate close model fit, and a value of 1.00

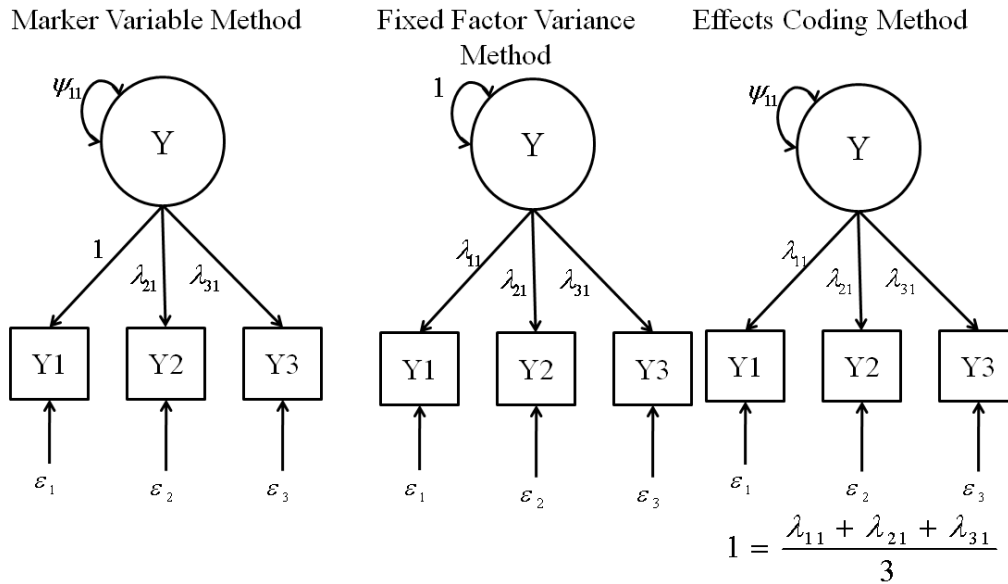
or greater indicates exact fit. The SRMR reports the standardized difference between the predicted and observed correlations in the model. A value less than .08 indicates good fit and a value of zero indicates exact fit (Hu & Bentler, 1999; Kenny, 2003).

**Identification and scale setting.** All latent variables must have a set scale. Latent variables are unobserved and they do not have a metric. Thus, one parameter must be fixed for each latent variable in order to set the scale of the latent variable. There are three main methods of setting the scale of latent variables: the marker variable method, the fixed factor variance method, and the effects coding method of identification (Little, Slegers, & Card, 2006). In the marker variable method of scale setting, for each latent variable, one factor loading is fixed to the value of one. In the marker variable method, the scale of latent variables depends on which factor loading is fixed. In the fixed factor variance method, the variance of each latent variable is fixed to one. In this method, covariances between latent variables are standardized and can be interpreted as correlations (Brown, 1996). In the effects coding method, the factor loadings are constrained to average one. This method allows all factor loadings and the latent variable variance to be estimated, however it requires specifying complex constraints.

One condition for a just identified model is that the model has as many estimated parameters as distinct pieces of information from sample data. In the covariance structure of SEM, the variances and covariances of variables are the pieces of information that are needed for identification. For a model with one latent variable and three indicators, there are six pieces of information available from the sample data (three variances and three covariances). There are seven parameters to be estimated in the model (one latent variance, three factor loadings, and three indicator variances). For this model to be identified, one parameter must be fixed, which

will also set the scale of the latent variable. Figure 1 demonstrates the three methods of scale setting for this situation.

Figure 1: Example of three methods of scale setting for latent variables.



When there are more than three indicators for a latent variable, the latent variable is *overidentified*, and one parameter must be fixed to set the scale. When there are only two indicators for a latent variable, the model is *underidentified* and two parameters must be fixed for identification (e.g., fixing both factor loadings to one, fixing one factor loading and the factor variance to one or fixing the factor variance to one and constraining the factor variances to be equal). All three methods of identification will result in the same model fit information; however, different methods of identification can result in different parameter estimates, standard errors, and tests of significance for individual parameters (Gonzalez & Griffin, 2001).

When analyzing data from experimental designs, changes in the mean structures are of primary interest to researchers; consequently, the majority of this chapter will focus on analyzing differences in the mean structures. The mean structure of a SEM must also be identified. For the

mean structure of one latent variable there are always  $q$  means available as pieces of information, where  $q$  is the number of indicators of the latent variable, and  $q+1$  parameters to be estimated. As with the covariance structure there are three methods of identifying the mean structure, and they are analogous to methods of setting the scale in the covariance structure. To identify the means, one of the indicator means can be fixed at zero, the latent mean can be set to zero, or the indicator means can be constrained to equal zero. The last technique, the effects coding method of identifying mean structures (Little et al., 2006), has several advantages. The effects coding method allows the latent mean, which is of primary interest in analysis of experimental data, to be estimated. The latent mean is not disproportionately influenced by one item, as it is when one indicator mean is fixed to zero. Throughout this paper, I will use the effects coding method of scale setting for the mean and covariance structures.

### **Experimental Designs with Only Categorical Independent Variables**

Experimental designs always have one or more categorical independent variables: experimental condition. In experimental designs, social psychologists are interested in determining if dependent variable means differ across conditions. Social psychologists have traditionally used MLR,  $t$ -tests, or one-way ANOVAs (which are special cases of MLR (Cohen, 1968)) to analyze data from these designs. Hancock (1997) describes two methods to analyze mean differences using SEM: the Multiple-Indicator Multiple-Cause (MIMIC) approach (Jöreskog & Goldberger, 1975) and the Structured Mean Modeling (SMM) approach (Sörbom, 1974). These two approaches are analogous to the MLR and ANOVA approaches, respectively. Throughout this section I will discuss these techniques in terms of testing differences among three or more means although the same techniques apply to testing differences between two means.

**MIMIC approach.** The MIMIC approach involves the specification of a set of variables to represent experimental conditions via a coding scheme, such as dummy coding, effects coding, or other coding methods. Dummy coded variables have values of zero or one and indicate the presence or absence of an experimental condition. Given  $k$  conditions, there will be  $k - 1$  dummy coded variables as predictors of dependent variables. Each dummy variable compares an experimental condition to all other experimental conditions. One condition will be the baseline condition, and this condition will not be represented by a dummy variable. Table 1 contains an example dummy coding scheme with three conditions. In this dummy coding scheme, group 3 is the baseline group and is not represented by a dummy variable. In this case the beta matrix would contain two variables, v1 and v2.

Table 1: Example dummy coding scheme

Group	v1	v2
1	1	0
2	0	1
3	0	0

The relationships among latent variables (**H**) in SEM can be expressed as:

$$\mathbf{H} = \mathbf{A} + \mathbf{B}\mathbf{H} + \mathbf{\Xi} \quad \text{EQ3}$$

Where **A** is a vector of latent means, **B** is a matrix of regression relationships, and **Ξ** is a vector of residuals for the structural regressions. With one dependent variable ( $\eta_1$ ) and three experimental conditions expressed as two dummy variables ( $\eta_2, \eta_3$ )<sup>2</sup>, the model is:

$$\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ \alpha_3 \end{bmatrix} + \begin{bmatrix} 0 & \beta_{12} & \beta_{13} \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{bmatrix} + \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \end{bmatrix} \quad \text{EQ 4}$$

The means of each group can be computed as a function of the intercept of the dependent variable and the values of the regression coefficients for each dummy variable. The mean of group 3 is the intercept of the dependent variable ( $\alpha_1$ ). The mean of group 1 is the intercept of the dependent variable added to the coefficient of the first dummy code variable ( $\alpha_1 + \beta_{12}$ ), and the mean of group 2 is the intercept of the dependent variable added to the coefficient of the second dummy code variable ( $\alpha_1 + \beta_{13}$ ). For this model, the main effect of the experimental condition is tested by testing the significance of the regression coefficients  $\beta_{12}$  and  $\beta_{13}$  using a nested model test. The nested model test can be used to compare two models, one with the regression coefficients  $\beta_{12}$  and  $\beta_{13}$  freely estimated and a nested model with the regression coefficients  $\beta_{12}$  and  $\beta_{13}$  fixed to zero. With a manifest dependent variable, the results from the MIMIC approach will be identical to results from MLR. The MIMIC approach makes the same assumptions of MLR — independent observations, equal variances across groups, and normally distributed errors. However, the MIMIC approach has several benefits over MLR. The MIMIC approach allows for multiple dependent variables (as does MANOVA) and it incorporates latent variables providing a more accurate measurement of dependent variables.

**SMM approach.** The SMM approach is analogous to ANOVA and involves splitting the sample into groups based on experimental condition and estimating separate models for each group; this approach is also known as multiple group SEM. Each group has a sample mean and covariance structure and a model implied mean and covariance structure is specified for each group:

$$\Sigma^g = \Lambda^g (\mathbf{I} - \mathbf{B}^g)^{-1} (\Psi^g) (\mathbf{I} - \mathbf{B}^g)^{-1'} \Lambda^g + \Theta_e^g, g = 1 \dots G \quad \text{EQ 5}$$

$$\mu^g = \tau^g + \Lambda^g \alpha^g$$

The mean and covariance structures of all groups are simultaneously estimated and the model implied mean and covariance structures are matched to the sample mean and covariance structures. One of the most powerful tools in multiple group SEM is the ability to equate parameters across groups. In the SMM approach latent means are equated across groups and the equivalence of means is determined by comparing two nested models: one model with latent means freely estimated and one model with latent means constrained to be equal. These two models are compared via a nested model  $\chi^2$  test. A significant  $\chi^2$  statistic indicates that means are different across conditions.

In its simplest form, using only manifest variables, the SMM approach is identical to ANOVA. In ANOVA a model with group means freely estimated (the alternative hypothesis) is compared to a model with group means constrained to be equal (the null hypothesis). If the model with means freely estimated fits the data significantly better than the model with means constrained to be equal (the null hypothesis is rejected) researchers conclude that the group means differ. In the SMM approach a researcher goes through the same steps; however, the steps are more explicit than in ANOVA. The researcher estimates two models, one with means freely estimated and one with means constrained to be equal and compares them to see whether model fit is significantly different.

The true power of the SMM approach becomes apparent when the dependent variables of interest are latent variables. Using latent variables with the SMM approach has the same benefits as using latent variables in the MIMIC approach (e.g., the ability to model measurement error). In the SMM approach there is one additional advantage — the ability to easily test assumptions about measurement invariance.<sup>3</sup> The MIMIC technique (as well as ANOVA and other GLM techniques) assumes that the measurement structure of variables is invariant across all groups (all

groups have the same factor loadings, factor variances, error variances, and item intercepts).

With the SMM approach measurement invariance can be tested in a series of nested models, with increasing constraints on each model (Little, 1997; Meredith, 1993). The first model, the *configural invariance* model, has the same measurement structure across groups ( $\Lambda$  has the same pattern of free and fixed parameters) and all parameters are free to vary across groups. The second model, the *weak factorial invariance* model, constrains factor loadings (in  $\Lambda$ ) to equality across groups and all other parameters are free across groups. The third model, the *strong factorial invariance* model, constrains factor loadings ( $\Lambda$ ) and item intercepts ( $\alpha$ ) to equality across groups and all other parameters are free to vary across groups. There are other types of invariance (e.g., invariance of factor variances and covariances, invariance of item error variances) however, only the three types of invariance I discussed are required for the purposes of the SMM technique. Factorial invariance is tested with a series of nested model  $\chi^2$  difference tests. The weak factorial invariance model is compared to the configural invariance model. If the comparison is **not** significant, the models do not differ, and weak factorial invariance is established. Next, the strong factorial invariance model is compared to the weak factorial invariance model, if the comparison is **not** significant, the models do not differ and strong factorial invariance is established. If strong factorial invariance is established, then latent means can be compared using the SMM approach. However, in some cases weak or strong factorial invariance may not be possible. Researchers can still establish partial measurement invariance, invariance of all but a small number of parameters (Byrne, Shavelson, & Muthen, 1989). Partial measurement invariance has little effect on latent mean differences (Kaplan & George, 1995). By investigating modification indices (a measure of how much the  $\chi^2$  statistic will decrease by freeing a fixed or constrained parameter), a researcher can discover which equality constraints



are preventing the establishment of weak or strong invariance and free those parameters. It is important to note that when investigating partial invariance, researchers should seek to free the minimum number of parameters to establish invariance. It may seem that achieving strong factorial invariance requires many constraints on the data, but it still has fewer constraints than ANOVA or the MIMIC technique, which assume invariance of loadings, intercepts, factor variances, and covariances and item error variances. However, if loadings, intercepts, factor variances and covariances, and item error variances are invariant across groups, then the SMM technique, MIMIC technique, and ANOVA will all provide similar results, but the SMM technique will require estimating more parameters.

Even in the simple case when all variables are manifest, the SMM approach provides advantages over traditional ANOVA techniques. ANOVA assumes that variables are normally distributed, all groups have equal variances, and observations are independent. In contrast, SMM requires only the assumption that observations are independent. In SMM, means and variances are estimated within each group and thus variances are not constrained to equality (as is assumed in ANOVA). Traditionally, SEM has assumed that variables are normally distributed; however, modern estimation techniques are robust to non-normality, and SEM can also be used to analyze data with categorical and count variables.

### **Multiple Independent Variables**

In social psychology, research designs with two or more categorical independent variables (factorial designs) or research designs with one categorical and one continuous variable are common. However, research in adapting SEM for experimental designs has largely ignored situations with multiple independent variables. Adapting the SMM and MIMIC methods for multiple independent variables is relatively straightforward.

**MIMIC approach.** For the MIMIC method, additional categorical independent variables are introduced by including additional dummy variables to represent the additional independent variables. The main effect of each independent variable is assessed by comparing two models, one with paths from the dummy variables to the dependent variable fixed to zero, and one with the paths freely estimated. The interaction between independent variables is represented by the products of the dummy coded variables for each independent variable. With one dependent variable ( $\eta_1$ ), two experimental conditions expressed as one dummy variable ( $\eta_2$ ), two experimental condition expressed as another dummy variable ( $\eta_3$ ), and the interaction between experimental conditions as the product of two variables ( $\eta_2\eta_3$ ) the model is:

$$\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_2\eta_3 \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ \alpha_3 \\ \alpha_4 \end{bmatrix} + \begin{bmatrix} 0 & \beta_{12} & \beta_{13} & \beta_{14} \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_2\eta_3 \end{bmatrix} + \begin{bmatrix} \xi_1 \\ 0 \\ 0 \\ 0 \end{bmatrix} \quad \text{EQ 6}$$

The significance of the interaction can be tested by comparing two nested models, one with the path from the product term fixed to zero and one with this path freely estimated. The advantage of this technique is that it is easily be extended to situations with more experimental conditions and more independent variables. A disadvantage to this technique is that computing cell means and probing significant interactions is not straightforward. Cell means must be computed as a function of the intercept ( $\alpha_1$ ) and the regression parameters  $\beta_{12}$ ,  $\beta_{13}$  and  $\beta_{14}$ . Furthermore, probing interactions using the MIMIC technique requires setting up additional constraints in the model (for examples see Appendix A). In the SMM approach, cell means require no additional computations and probing interactions can be easily accomplished with a series of nested model tests.

Including a continuous independent variable with the MIMIC approach is also relatively straightforward. The continuous independent variable is introduced into the model and it predicts the dependent variable in the model along with the dummy coded independent variable. With one dependent variable ( $\eta_1$ ), two experimental conditions expressed as one dummy variable ( $\eta_2$ ), and a continuous independent variable ( $\eta_3$ ) the model is:

$$\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ \alpha_3 \end{bmatrix} + \begin{bmatrix} 0 & \beta_{12} & \beta_{13} \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{bmatrix} + \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \end{bmatrix} \quad \text{EQ 7}$$

The main effect of the independent variable is the regression coefficient representing the effect of the independent variable on the dependent variable ( $\beta_{13}$ ). Techniques for investigating interactions between categorical and continuous predictors differ depending on whether the independent variable is a manifest or latent variable. If the independent variable is a manifest variable then the interaction is represented by the product of all dummy coded variables and the continuous independent variable, the same technique used with two categorical independent variables. When the continuous predictor is a latent variable, it is impossible to form product terms, thus other techniques are needed. There are several methods for examining interactions between latent variables (Jöreskog & Yang, 1996; Kenny & Judd, 1984; Klein & Moosbrugger, 2000; Lin, Wen, Marsh, & Lin, 2010; Little, Bovaird, & Widaman, 2006); however, some require complex constraints (Jöreskog & Yang, 1996; Kenny & Judd, 1984) or that both variables in the interaction be latent variables (Klein & Moosbrugger, 2000). For the purposes of investigating interactions between a categorical, dummy coded, variable and a continuous latent variable the orthogonalizing approach by Little and colleagues (2006) or the double mean centering approach by Lin and colleagues (2010) are ideal.

In the orthogonalizing approach all possible product terms of latent variable indicators are regressed on all other indicators and the residuals from this regression are saved as a new variable representing the interaction. For example, if there is a predictor variable Z with three indicators (Z1, Z2, Z3) and a categorical independent variable X with two levels (requiring only 1 dummy variable X), the series of regressions would look like:

$$\begin{aligned} XZ1 &= \beta_0 + \beta_1 X + \beta_2 Z1 + \beta_3 Z2 + \beta_4 Z3 \\ XZ2 &= \beta_0 + \beta_1 X + \beta_2 Z1 + \beta_3 Z2 + \beta_4 Z3 \\ XZ3 &= \beta_0 + \beta_1 X + \beta_2 Z1 + \beta_3 Z2 + \beta_4 Z3 \end{aligned} \quad \text{EQ8}$$

The residuals from each of these regressions would be saved as a new variable, and these three new variables would be indicators of the latent interaction variable XZ. Finally, the dependent variable would be regressed on the X, Z and XZ. This technique can be expanded to include categorical variables with more than two levels; it would merely require an additional set of regression equations for each additional categorical independent variable. There are several drawbacks to this technique; it requires a two step process that is unwieldy and could quickly become time consuming when latent variables have many indicators or categorical variables have many levels.

The procedure for utilizing the double mean centering technique for latent variable interactions is similar to the orthogonalizing technique. The first step in the double mean centering technique is to mean center all indicators of latent variables. If a categorical variable is one of the predictors it should be effects coded (e.g., a variable with two levels will have values of -1 and 1 for the two levels), not dummy coded. Next, all possible product terms of latent variable indicators are computed. All product terms are then mean centered and used as indicators of the latent interaction variable. Finally, the dependent variable would be regressed on the main effect and interaction variables. In addition, methods for probing latent interactions

using the orthogonalizing approach or the double mean centering approach, or any other approach to latent interactions, have not been well established. Fortunately, the SMM approach provides an alternative that does not suffer from these potential issues.

**SMM approach.** For factorial designs, a hybrid of the SMM and MIMIC techniques can be used. This hybrid technique may be especially useful when samples sizes are relatively small, and using a hybrid of the SMM and MIMIC techniques requires estimating fewer parameters. In this technique, one independent variable (X) is represented by different groups and the other independent variable is represented by a dummy coded variable(s) (Z). The main effect of each variable is assessed differently. For independent variable X, the main effect is tested with the SMM technique, a nested model comparison between two models, one with latent means free to vary across groups, one with latent means constrained to equality across groups. For independent variable Z, the main effect is tested with the MIMIC technique: the effect of the dummy variable(s) representing Z is constrained to be equal across groups.

One assumption of the MIMIC technique is that the variance of the dependent variable is the same across groups. When combining the SMM and MIMIC techniques, the variance of the dependent variable is free to vary across groups. There are two methods to satisfy the assumption of equal variances across groups. The variances of the dependent variable can be constrained to equality across groups (this constraint can be tested as part of invariance testing). Alternatively, a phantom variable can be used to scale the dependent variables in different groups (Little, 1997). A phantom variable is a latent variable that does not have any indicators. In this method, the dependent variable is regressed on the phantom variable, the residual variance of the dependent variable is fixed to zero in all groups, the variance of the phantom variable is fixed to one in all groups, and the regression path is freely estimated in all groups (when using the effects coding

method of identification; other methods of identification require further constraints). Finally, the phantom variable is regressed on the independent variable.

The interaction between X and Z is computed by comparing two models, a main effect model with latent means free to vary across groups and the effect of Z on the dependent variable constrained to equality across groups and an interaction model with the effect of Z on the dependent variable free to vary across groups. If the interaction model provides a better fit to the data, probing the interaction becomes straightforward. Each group provides a test of the simple effect of Z on the dependent variable at a value of X.<sup>3</sup>

Including a continuous independent variable in the SMM approach is identical to the SMM/MIMIC hybrid method discussed above. The main effect of the categorical variable is assessed through the SMM approach, and the main effect of the continuous variable is assessed by the effect of the continuous independent variable on the dependent variable constrained to equality across groups. The interaction between the continuous and categorical variables is assessed by comparing two models, a main effect model with latent means free to vary across groups and the effect of the continuous variable on the dependent variable constrained to equality across groups and an interaction model with the effect of the continuous variable on the dependent variable free to vary across groups. Probing a significant interaction is straightforward as each group provides the simple slope of the categorical variable on the dependent variable for one level of the categorical variable.

### **Effect Sizes**

The field of psychology has recognized the importance of reporting effect sizes along with hypothesis tests (Wilkinson & the Task Force on Statistical Inference, 1999). When analyzing experimental data with a *t*-test or ANOVA, researchers generally use the standardized

difference between two means,  $d$  (when comparing 2 groups), or the standardized standard deviation of population means,  $f$  (when comparing >2 groups) (Cohen, 1988). Hancock (2001) provided extensions of these two effect sizes to the analysis of latent means using both the SMM and MIMIC approaches.

**Effect sizes for the MIMIC approach.** For the two group case, there is one dummy coded variable representing the groups. The effect size for this case is:

$$d = |\beta| / \Psi_{\xi} \quad \text{EQ 9}$$

where  $\beta$  is the regression parameter relating the dummy coded variable and the dependent variable and  $\Psi_{\xi}$  is the variance of the disturbance ( $\xi$ ), and represents the variance in the dependent variable that is not explained by the dummy coded variable. When there are more than two categories ( $J$ ) in the independent variable, the independent variable is represented by  $J - 1$  dummy variables. It is possible to derive an effect size from the  $J - 1$  regressions paths from dummy variables to the dependent variable, but Hancock (2001) proposes a simpler computation for the effect size  $f$ : examining the path to the dependent variable ( $\eta$ ) from the disturbance term ( $\xi$ ), which I will refer to as  $\varphi$  in a standardized model. In unstandardized models,  $\varphi$  is fixed to one, but in a standardized model it is estimated. Furthermore  $1 - \varphi^2$  is the proportion of variance explained in the dependent variable (or  $R^2$ ).<sup>4</sup> Cohen (1988) demonstrated that the standardized effect size  $f$  can be expressed as a function of  $R^2$ :  $f = \sqrt{R^2 / (1 - R^2)}$ . Thus the effect size  $f$  can be computed as:

$$f = \sqrt{(1 - \varphi^2) / \varphi^2} \quad \text{EQ 10}$$

These effect sizes are interpreted identically to the  $d$  and  $f$  effect sizes for ANOVA.

**Effect sizes for the SMM approach.** When comparing two groups, there are two latent means to be compared ( $\alpha_1$  and  $\alpha_2$ ). The effect size is computed as the difference between means divided by a pooled standard deviation. In the SMM approach  $d$  is computed as:

$$d = |\alpha_1 - \alpha_2| / \sqrt{\phi} \quad \text{EQ 11}$$

where  $\phi$  is the pooled variance across groups which can be estimated by constraining the factor variance to equality across groups or computed as:

$$\phi = (n_1\phi_1 + n_2\phi_2) / (n_1 + n_2) \quad \text{EQ 12}$$

where  $n_1$  and  $\phi_1$  are the sample size and variance of the first group, and  $n_2$  and  $\phi_2$  are the sample size and variance of the second group.

For the case of more than two categories, the effect size  $f$  is used. The effect size  $f$  is the standardized standard deviation of sample means;  $f$  can be expressed conceptually as  $f = \sigma_m / \sigma$  where  $\sigma_m$  is the standard deviation of sample means and  $\sigma$  is the population standard deviation. For the SMM approach the effect size would be  $f = s_\alpha / \sqrt{\phi}$  where  $s_\alpha$  is the sample standard deviation of the latent means and  $\phi$  is the pooled variance across groups.  $s_\alpha$  is computed as:

$$s_\alpha = \sqrt{\sum n_j (\alpha_j - \alpha)^2 / \sum n_j} \quad \text{EQ 13}$$

where  $n_j$  is the sample size of the  $J^{\text{th}}$  group,  $\alpha_j$  is the mean of the  $J^{\text{th}}$  group, and  $\alpha$  is the grand mean across all groups.  $\phi$  is computed similarly to the two group case:

$$\phi = \sum n_j \phi_j / \sum n_j \quad \text{EQ 14}$$



As in the case of the MIMIC approach, effect sizes are interpreted identically to the  $d$  and  $f$  effect sizes for ANOVA.

### **A Comparison Between SEM and GLM Approaches to Analyzing Experimental Data**

For social psychology, GLM has been the dominant technique for analyzing data from experimental designs. The SEM approaches, both the MIMIC and SMM, have several advantages over GLM, but SEM approaches also have weaknesses when compared to GLM. The main advantage of the SEM approaches concerns the use of latent variables. Latent variable modeling allows researchers to model measurement error and to obtain a more precise estimate of the means and variances of constructs. The increased precision in latent variable modeling results in less error variance in constructs and greater power when investigating differences across groups. Furthermore, through fit indices, SEM provides information about the fit of a model to data. Specifically, fit indices provide information about how well each of the items for each construct represent the latent variable. In ANOVA, each item is assumed to have the same relationship with the latent variable and there is no information on how the model fits the data. SEM approaches to analyzing experimental data also can easily be used to estimate group differences for categorical or non-normal data<sup>5</sup> and SEM can be used to investigate categorical and continuous variables simultaneously. Finally, SEM is a very flexible multivariate statistical technique. It can be used to analyze complex relationships among variables and to investigate how these complex relationships differ across experimental groups.

The SMM approach provides several advantages over the GLM and MIMIC approaches. The SMM approach permits explicit tests of the measurement equivalence of the dependent variable across groups and allows researchers to relax measurement equivalence across groups if needed. Moreover, the SMM approach does not require the researcher to assume that the

variance of dependent variables is equal across groups and it does not require the researcher to assume that manifest variable error variances are the same across groups. Finally, the SMM approach allows researchers to easily estimate and probe interactions between experimental condition and continuous or categorical variables.

Given the advantages of the SEM approaches to analyzing experimental data, it may seem that researchers should not continue to use the GLM. However, under some conditions, GLM has advantages over SEM. Generally, GLM analyses are simpler to implement and do not require specialized software, thus in cases where results from GLM and SEM do not differ, GLM would be preferred. For example, when groups have equal variances, and the dependent variable is a single item (so a latent variable cannot be estimated), the SEM and GLM approaches will have similar results. In this situation, the MIMIC approach with its additional constraints will more closely approximate the results from GLM than the SMM approach. The maximum likelihood estimation used by SEM is a large sample technique and may require larger sample sizes for models to converge and provide appropriate results. In addition, the SMM approach requires estimating more parameters than the MIMIC approach, and at small sample sizes, models with more free parameters may have trouble converging.

Using SEM for analysis of experimental data is a powerful technique that can allow researchers to better understand their data. Both the SMM and MIMIC approaches allow researchers to use latent variables to represent constructs and the SMM approach also allows researchers to relax assumptions inherent in GLM and the MIMIC approaches. In this dissertation I used the SMM approach to analyze data from five experimental conditions. I examined continuous moderators (Study 1 and Study 2) and a categorical moderator (Study 3)

with the MIMIC approach. All analyses were conducted using *Mplus* v 6.1 (Muthén & Muthén, 1998-2010). Example syntax is provided in Appendix A.

### CHAPTER III: Study 1

The purpose of Study 1 is to determine how expressing different emotions as part of an apology affects victims' perceptions of perpetrator groups. In this study I used a conflict lacking any familiar historical context. Participants imagined they were members of an imaginary group and read about a conflict between their group and another imaginary group. They then read one of four apologies from the perpetrator group or did not read about an apology. I used a minimal group situation to assess the impact of expressing emotions in an apology separate from any historical context. Real world historical contexts may include events that would bias victim responses to apologies. For example, a change in the perpetrator group's leaders after harm occurred may lessen the impact of an apology and result in a decreased probability of forgiveness by victims. In this situation, victims may not believe that the actual perpetrators of harm feel remorse for their actions and victims may view the apology as insincere.

The mere act of categorizing individuals into an ingroup and an outgroup can elicit intergroup discrimination (Tajfel, Billig, Bundy, & Flament, 1971). Research has demonstrated that participants feel guilt about their actions even in a minimal group situation (Doosje, et al., 1998). I used a minimal group situation in Study 1 because the minimal group situation provides a stiff test of my hypotheses. It does not have the richness of a real world conflict, but any results from a minimal group situation will likely generalize to other conflicts and the results may even be stronger in the context of real world conflicts.

I predicted that apologies containing self-focused emotions, guilt, shame, and anger, would result in more forgiveness of perpetrators than an apology with an other-focused emotion, sympathy, or no apology. Furthermore, I expected that this effect would be stronger when perpetrator groups are viewed as moral compared to when perpetrator groups are viewed as immoral.

## Participants

Participants were 194 introductory psychology students (91 females), who were given partial course credit for participating. The mean age of the participants was 19.08 years ( $SD=2.08$ ) and all participants were European Americans and United State citizens.

## Procedure and Materials

Participants completed the study online and were randomly assigned to read one of five descriptions of the conflict. Each description began with:

Please imagine the following situation:

You are a member of group X. In the past group X has been the victim of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group X (your group).

Participants in the emotion conditions then read (guilt condition):

Recently, a spokesperson for group Y made the following public statement. “As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel guilty about the harm done to group X.”

In the shame and anger conditions, shame or anger replaced the word guilt in the apology. The sympathy apology read “As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel sympathy for the suffering of group X.” Finally, participants in the no apology condition did not read an apology from the leaders of group Y.

Participants next answered four questions designed to serve as manipulation checks (e.g., “How much you think the members of Group Y are experiencing guilt about the harm to Group X?” repeated with shame, anger and sympathy) on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale (See Appendix B for all materials). Participants then rated the perpetrator group, Group Y, on several dimensions on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. These dimensions included the measure of morality (items: moral, humanitarian). Participants reported the emotions they felt toward the perpetrator groups on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*)

scale. These emotion items included an anger index (items: upset, morally outraged, irritated, angry) and a disgust index (items: disgust, contempt). Next, participants responded to a four item forgiveness scale adapted from Wohl and Branscombe (2005; “It is possible for me to forgive today’s members of Group Y for the harm they caused Group X”). Finally participants reported demographic information.

## Results

Participants who completed the survey in less than 2 minutes were excluded from analysis. Pilot testing indicated that the minimum time to take the survey was four minutes and it was assumed that these participants did not read the manipulation or all of the measures (final  $N=174$ ). The excluded participants were distributed equally across conditions (Guilt  $N=3$ , Shame  $N=7$ , Anger  $N=3$ , Sympathy  $N=2$ , No apology  $N=5$ ),  $\chi^2(4)=4.00$ ,  $p=.406$ . All analyses were conducted using the SMM approach to testing mean differences.<sup>6</sup> For Study 1, all manipulation checks were manifest variables, and all continuous independent variables and dependent variables were latent variables. All latent variables were tested for invariance (see Table 6).

**Structural Equation Models.** All models used items as indicators of the latent variables. The number of indicators per latent variable was the number of items on each measure as described in the methods section. To test the main effect of emotion condition for all main effects and dependent variables two models were compared. One model estimated the mean of the latent variable estimated separately in each group; this model provided the estimates of condition means in Tables 4 and 7. The second model constrained the means of the latent variable to equality across all groups. A nested model comparison between these two models provided the  $\chi^2$  statistic reported for each main effect. To test the main effect of morality, the dependent variable of interest was regressed on morality and the effect of morality on the

dependent variable was constrained to equality across groups. Finally, to test the interaction between emotion condition and morality, two models were compared. One model was the model used to assess the main effect of morality. The other model regressed the dependent variable on morality and the effect of morality on the dependent variable was free to vary across groups. A nested model comparison between these two models provided the  $\chi^2$  statistic reported for each interaction. Significant interactions were probed by investigating the effect of morality on the dependent variable within each emotion condition.

### Manipulation Checks

Means, standard deviations and chi-square difference tests for each manipulation check are presented in Table 4.

Table 2: Study 1: Means, standard deviations, and test statistics for manipulation checks

DV	Guilt ( <i>N</i> =35 ) M (SD)	Shame ( <i>N</i> =31) M (SD)	Anger ( <i>N</i> =35) M (SD)	Sympathy ( <i>N</i> =37) M (SD)	No apology ( <i>N</i> =32) M (SD)	$\chi^2$ difference test	<i>f</i>
Guilt	3.05 (1.28)	3.08 (1.04)	3.32 (1.10)	3.19 (0.73)	2.75 (1.03)	$\chi^2$ (4)=2.84, <i>p</i> =.585	0.18
Shame	2.79 (1.00)	2.83 (1.14)	3.00 (0.90)	3.38 (0.93)	2.56 (1.10)	$\chi^2$ (4)=5.72, <i>p</i> =.221	0.27
Anger	3.05 (0.97)	2.83 (0.99)	3.18 (1.07)	3.44 (0.93)	2.56 (1.00)	$\chi^2$ (4)=6.86, <i>p</i> =.143	0.30
Sympathy	3.26 (0.94)	2.75 (0.97)	3.20 (1.03)	3.27 (0.99)	2.74 (0.92)	$\chi^2$ (4)=9.84, <i>p</i> =.043	0.25

The sympathy manipulation check indicated that means differed across conditions. Post-hoc comparisons, using a modified Bonferoni approach (Shaffer, 1986), found that participants in the sympathy condition believed perpetrators felt more sympathy than participants in the no apology condition. All other comparisons were not significant at the adjusted *p* value.

There were no differences in the guilt, shame, or anger manipulation check across conditions.<sup>7</sup> One possible explanation for this finding is that terms such as guilt, shame and sympathy are used interchangeably by lay people when discussing emotions. The correlations

among the manipulation checks are presented in Table 5. The guilt and shame manipulation checks were strongly related, as were sympathy and anger. Participants' responses to the manipulation check may have been driven by how participants' inferred the mental state of the perpetrators and not by the exact text in any condition. A multivariate analysis investigating all manipulation checks simultaneously also found no significant differences across conditions. It appears that the manipulation did not affect participants' perceptions of the emotions the perpetrator group were experiencing.

Another possibility for the lack of differences in the manipulation checks was a lack of power to detect effects. Power for the nested model test was assessed using a web calculator for testing the power of a nested model test (Preacher & Coffman, 2006). Power was high for the guilt manipulation check (power=.99) but low for the shame manipulation check (power=.36) and anger manipulation check (power=.05). Power was not assessed for the sympathy manipulation check since condition had a significant effect on the sympathy manipulation check. The lack of significant manipulation checks may have been due to a lack of power.

Table 3: Study 1: Correlations among the manipulation checks

	I	II	III	IV
I. Guilt	1			
II. Shame	.65*	1		
III. Anger	.14	.17*	1	
IV. Sympathy	.28*	.38*	.57*	1

\*  $p < .05$

### **Invariance Testing**

All dependent variables and moderators were tested for metric invariance, see Table 6. All variables passed the test of strong invariance. The forgiveness and anger measures displayed



only partial invariance. For the forgiveness and anger measures, invariance failed in the shame condition. The shame condition was the condition with the most participants excluded due to short response times.

Table 4: Study 1: Invariance testing of independent and dependent variables

Model	$\chi^2$	df	<i>p</i>	CFI	RMSEA	RMSEA 90% CI	SRMR	$\Delta \chi^2$	$\Delta$ df	$\Delta p$
Forgiveness										
Configural inv.	10.58	10	.391	.99	.048	.000 .193	.046			
Weak inv.*	24.34	21	.228	.98	.068	.000 .167	.152	13.76	11	.247
Strong inv.	32.71	33	.482	1.00	.000	.000 .124	.175	8.37	12	.755
Morality <sup>+</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	4.26	4	.372	1.00	.044	.000 .265	.162	4.26	4	.372
Strong inv.	7.74	8	.459	1.00	.000	.000 .196	.167	3.48	4	.481
Anger										
Configural inv.	27.73	10	.017	.97	.186	.076 .293	.037			
Weak inv.	37.18	22	.023	.96	.142	.054 .220	.138	9.45	12	.664
Strong inv.**	56.81	33	.006	.93	.146	.078 .208	.129	19.63	11	.051
Disgust <sup>+</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	1.61	4	.808	1.00	.000	.000 .161	.135	1.61	4	.808
Strong inv.	5.31	8	.724	1.00	.000	.000 .149	.137	3.70	4	.448

\*Partial measurement invariance. Loading of Forgiveness 3 is free in Shame condition.

\*\*Partial measurement invariance. Mean of Moral Outrage is free in Shame condition

<sup>+</sup>Morality and disgust each had two indicators. As a result the configural invariance model is a saturated model and has perfect fit

## Main Effects

**Condition main effects.** Table 7 shows the means of all variables in each condition and the results of main effect tests.

Table 5: Study 1: Means and tests statistics for dependent and independent variables

DV	Guilt	Shame	Anger	Sympathy	No apology	$\chi^2$ difference test	<i>f</i>
Forgiveness	5.35	5.40	5.67	5.86	5.37	$\chi^2 (4)=7.22, p=.125$	0.18
Morality	3.47	2.87	2.96	2.56	2.83	$\chi^2 (4)=11.64, p=.020$	0.30
Anger	5.28	5.53	5.53	4.86	5.45	$\chi^2 (4)=5.25, p=.263$	0.20
Disgust	4.32	4.48	4.37	3.85	4.67	$\chi^2 (4)=9.23, p=.056$	0.28

There was a significant main effect of condition on the morality variable. Based on post hoc testing, the means for morality differed in the guilt and sympathy conditions and the guilt and no apology conditions. Groups that expressed guilt in an apology were viewed as more moral than

groups that expressed sympathy in an apology or groups that did not apologize. All other condition main effects were not significant.

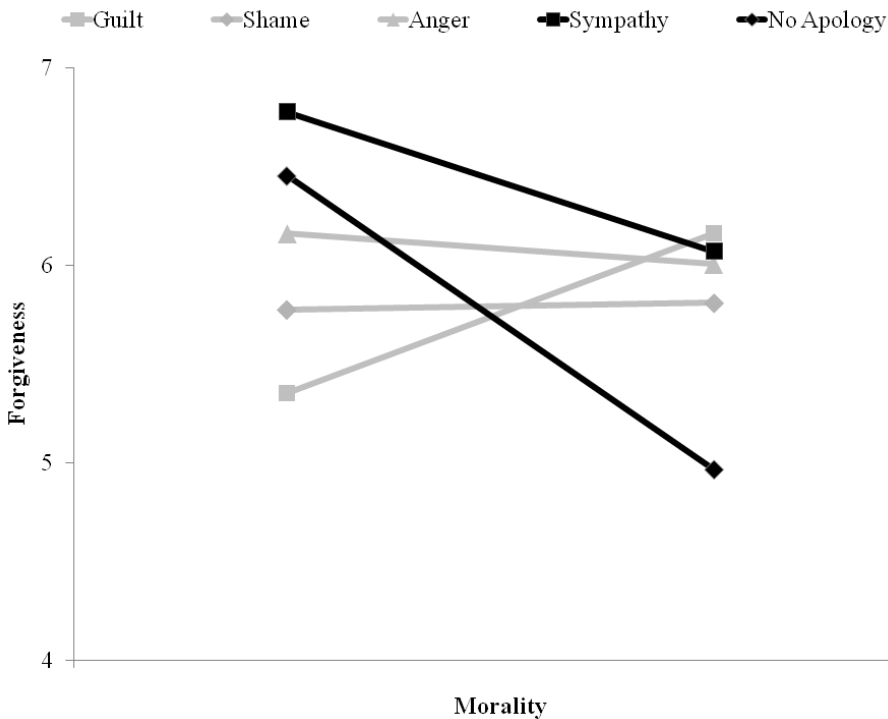
A possibility for the lack of main effects was a lack of power to detect effects. Power for the nested model test was assessed using a web calculator for testing the power of a nested model test (Preacher & Coffman, 2006). Power was high for the main effect of emotion condition on forgiveness (power=.99), anger (power=.99) and disgust (power=.83). The non-significant main effects of emotion condition were not due to low power.

**Morality main effects.** There was a negative effect of morality on forgiveness,  $b=-.20$ ,  $se=.09$ ,  $p=.020$ . Morality was unrelated to anger,  $b=.07$ ,  $se=.13$ ,  $p=.591$ , or disgust at the perpetrators,  $b=.09$ ,  $se=.10$ ,  $p=.392$ . Surprisingly, the more moral a group was perceived to be, the less the group was forgiven.

### **Interactions with Morality**

I investigated whether morality moderated the relationship between condition and the dependent variables. I predicted that the content of apologies would have different meanings depending on how moral the perpetrator group was believed to be. Morality did not moderate the relationship between condition and anger,  $\chi^2(4)=6.42$ ,  $p=.170$ , or disgust,  $\chi^2(4)=8.60$ ,  $p=.057$ .<sup>9</sup> However, morality moderated the relationship between condition and forgiveness,  $\chi^2(4)=13.75$ ,  $p=.008$ . Morality was unrelated to forgiveness in the guilt, shame and anger conditions, but it was negatively related to forgiveness in the sympathy and no apology conditions (see Figure 2).

Figure 2: Study 1: Interaction between morality and condition on forgiveness



The slope of forgiveness on morality differed from zero in the sympathy,  $b=-.35$ ,  $se=.16$ ,  $p=.023$ , and no apology,  $b=-.74$ ,  $se=.25$ ,  $p=.002$ , conditions; simple slopes were not significant in the guilt, shame and anger conditions.

### Discussion

There was no effect of apology content on forgiveness of perpetrators; the emotion expressed while issuing the apology did not affect forgiveness. However, the perceived morality of the perpetrator group was negatively related to forgiveness, the more moral a perpetrator group seemed to be, the less the perpetrators were forgiven. This effect was qualified by a morality by condition interaction. When perpetrators of harm did not apologize or expressed sympathy while apologizing, morality was negatively related to forgiveness. When the perpetrator group apologized by expressing a self-focused emotion, morality was unrelated to forgiveness. Surprisingly, when morality was low, the sympathy and no apology conditions had

high levels of forgiveness. This may be because victims have different expectations for perpetrator groups depending on the perceived morality of the perpetrator group. For a perpetrator group that is not moral, expectations for an apology or other reparative actions are low. Thus, especially in a low impact situation as was used in this study, participants in perpetrator groups that are perceived to be low in morality may be forgiven because it is believed that they will never issue a sincere apology. When perpetrator groups are viewed as moral, perceivers may have higher expectations of them. A moral group may be expected to issue an apology that takes responsibility for their actions. If the apology given by a perpetrator group does not take responsibility for their actions, as in the sympathy or no apology conditions, then the perpetrator group is less likely to be forgiven.

There are several limitations to this study. The groups and conflict that participants read about were fictional and thus the situation may not have exerted much influence on participants. A conflict that involves actual harm and groups that are more central to participants' self-image might result in different findings. In Study 2, I attempted to address these limitations by investigating how victim groups respond to perpetrator apologies in the context of real world harm doing. I also investigated whether group identification would moderate the effect of an apology on forgiveness of perpetrators. Individuals higher in group identification are less likely to forgive perpetrators of harm when an apology is not offered (Brown et al., 2008a). In addition, highly identified group members distrust outgroup members more than low identifiers (Voci, 2006). Thus, I predict that group identification will be negatively related to forgiveness and this effect will be stronger when a perpetrator group offers an apology.

## CHAPTER IV: Study 2

The purpose of Study 2 is to further investigate how expressing different emotions in an apology affects victims' perceptions of perpetrator groups. In this study I used a conflict involving an important historical context in which considerable actual harm was done. American participants read about the Japanese attack on Pearl Harbor and then read one of four apologies from the Japanese or did not read about an apology.<sup>10</sup> Furthermore, in this context I was able to measure ingroup identification as an additional possible moderator. Highly identified victim group members are less likely to remember apologies and are less likely to forgive perpetrators of harm (Philpot & Hornsey, 2010). I predict that high identifiers will be less likely to forgive perpetrators and high identifiers will be less likely to forgive perpetrators of harm when the perpetrators have not apologized, than when they have apologized, regardless of apology content. Additionally, low identifiers will be equally likely to forgive perpetrators whether they have apologized or not.

### **Participants**

Participants were 117 introductory psychology students (62 females), who were given partial course credit for participating. The mean age of the participants was 19.09 years ( $SD=1.77$ ) and all participants were European Americans and United State citizens.

### **Procedure and Materials**

Participants completed the study online. They first completed a seven item measure of national identification based on the measure used by Doosje, Branscombe, Spears, and Manstead (1998; e.g., "Being an American is an important reflection of who I am") on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Participants were randomly assigned to read one of five descriptions of conflict. Each description began with:

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearl Harbor without warning. This attack killed over 2,400 Americans and wounded more than 1,300.

Participants in the emotion conditions then read (guilt condition):

As the prime minister of Japan I would like to apologize for all Japanese for the harm done to Americans in the Pearl Harbor attack. As a nation we feel guilt about the harm done to America in the attack.”

In the shame and anger conditions, shame or anger replaced the word guilt in the apology. The sympathy apology read “As the prime minister of Japan I would like to apologize for all Japanese for the harm done to Americans in the Pearl Harbor attack. As a nation we feel sympathy for the suffering Americans experienced due to the attack.” Finally, participants in the no apology condition did not read that an apology was given by the Japanese government.

Participants next answered four questions designed to serve as manipulation checks (e.g., “How much you think the Japanese are experiencing guilt about the attack on Pearl Harbor?”, then repeated with shame, anger and sympathy) on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Participants then rated the perpetrator group—the Japanese—on several dimensions on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. These dimensions included the measure of morality used previously (items: moral, humanitarian) as well as a measure of truthfulness (items: trustworthy, truthful). Participants reported the emotions they felt toward the perpetrator group on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. These emotion items included an anger index (items: upset, morally outraged, irritated, angry) and a disgust index (items: disgust, contempt). Next, participants responded to a four item forgiveness scale adapted from Wohl and

Branscombe (2005; “It is possible for me to forgive today’s Japanese for the harm they caused Americans”) on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Finally participants reported demographic information.

## Results

Participants who completed the survey in less than 2 minutes were excluded from analysis. Pilot testing indicated that the minimum time to take the survey was four minutes and it was assumed that these participants did not read the manipulation or all of the questions (final  $N=100$ ). The excluded participants were equally distributed across conditions (Guilt  $N=3$ , Shame  $N=5$ , Anger  $N=3$ , Sympathy  $N=4$ , No apology  $N=2$ ),  $\chi^2(4)=1.53, p=.821$ . All analyses were conducted using the SMM approach to testing mean differences.<sup>11</sup> For Study 2, all manipulation checks used manifest variables. Due to sample size limitations, all continuous independent variables were also manifest variables and all dependent variables were latent variables.<sup>12</sup> All latent variables and continuous independent variables were tested for invariance.

**Structural Equation Models.** All models used items as indicators of latent variables. The number of indicators per latent variable was the number of items on each measure as described in the methods section. To test the main effect of emotion condition for all main effects and dependent variables two models were compared. One model estimated the mean of the latent variable estimated separately in each group, this model provided the estimates of condition means in Tables 8 and 11. The second model constrained the means of the latent variable to equality across all groups. A nested model comparison between these two models provided the  $\chi^2$  statistic reported for each main effect. To test the main effect of morality, the dependent variable of interest was regressed on morality and the effect of morality on the dependent variable was constrained to equality across groups. Finally, to test the interaction



between emotion condition and morality, two models were compared. One model was the model used to assess the main effect of morality. The other model regressed the dependent variable on morality and the effect of morality on the dependent variable was free to vary across groups. A nested model comparison between these two models provided the  $\chi^2$  statistic reported for each interaction. Significant interactions were probed by investigating the effect of morality on the dependent variable within each emotion condition.

To test the interaction between emotion condition and morality or identification, two models were compared. One model was the model used to assess the main effect of morality or identification. The other model regressed the dependent variable on morality or identification and the effect of morality or identification on the dependent variable was free to vary across groups. A nested model comparison between a model with the effect of morality or identification on the dependent variable constrained to equality across groups and a model with the effect of morality or identification on the dependent variable freely estimated across groups provided the  $\chi^2$  statistic reported for each interaction. Significant interactions were probed by investigating the effect of morality or identification on the dependent variable within each emotion condition.

To test the interaction between morality and identification, a product term was computed to represent the interaction. Then, morality, identification and the product term were regressed on the dependent variable of interest. In the model testing the interaction between morality and identification, the effects of morality and identification on the dependent variable were free to vary across levels of the emotion condition, but the effect of the product term was constrained to equality across groups. Finally, to test the three-way interaction of emotion condition, morality condition and identification a model was run with the effects of morality, identification and their product term free to vary across levels of the emotion condition. A nested model comparison

between this model and the model assessing the interaction between identification and morality provided the  $\chi^2$  statistic reported for each three-way interaction.

### Manipulation Checks

Means, standard deviations and chi-square difference tests for each model are presented in Table 8.

Table 6: Study 2: Means, standard deviations, and test statistics for manipulation checks

DV	Guilt (N=20) M (SD)	Shame (N=19) M (SD)	Anger (N=20) M (SD)	Sympathy (N=20) M (SD)	No apology (N=21) M (SD)	$\chi^2$ difference test	<i>f</i>
Guilt	3.11 (1.05)	3.07 (1.16)	3.04 (1.07)	3.21 (0.94)	2.73 (1.13)	$\chi^2(4)=2.41, p=.661$	0.15
Shame	2.61 (0.95)	2.92 (1.16)	3.25 (1.00)	2.86 (0.91)	2.92 (1.07)	$\chi^2(4)=4.76, p=.313$	0.20
Anger	2.17 (1.07)	2.29 (1.10)	2.82 (1.41)	2.93 (0.80)	2.89 (1.12)	$\chi^2(4)=7.93, p=.094$	0.29
Sympathy	3.00 (1.20)	2.71 (1.22)	2.96 (1.07)	3.36 (0.89)	2.69 (1.20)	$\chi^2(4)=4.35, p=.361$	0.22

There were no differences on any of the manipulation checks across conditions.<sup>13</sup> One possible explanation for this finding is that terms such as guilt, shame and sympathy are used interchangeably by lay people when discussing emotions. The correlations among the manipulation checks are presented in Table 9. The guilt and shame manipulation checks were strongly related, as were sympathy and anger. Participants' responses to the manipulation checks may reflect participants' guesses about the perpetrators' state of mind and not what participants recalled from the text in any condition. A multivariate analysis investigating all manipulation checks simultaneously did not yield different results from the univariate results reported above.

Another possibility for the lack of differences in the manipulation checks was a lack of power to detect effects. Power for the nested model test was assessed using a web calculator for testing the power of a nested model test (Preacher & Coffman, 2006). Power was high for the anger manipulation check (power=.96) but power was low for the guilt manipulation check

(power=.06), shame manipulation check (power=.30), and sympathy manipulation check (power=.15). The lack of significant manipulation checks may have been due to a lack of power.

Table 7: Study 2: Correlations among manipulation checks

	I	II	III	IV
I. Guilt	1			
II. Shame	.54*	1		
III. Anger	.16	.29*	1	
IV. Sympathy	.68*	.57*	.14	1

\*  $p < .05$

### **Invariance Testing**

All dependent variables and moderators were tested for metric invariance (see Table 10). All variables passed the test of strong invariance. However, the identification measure displayed poor fit. An exploratory factor analysis indicated that items 2 ('Being an American is an important reflection of who I am') and 3 ('In general, being an American is an important part of my self-image') of the scale did not load on a single factor. When these items were dropped from the scale, the measure displayed good fit. All analyses using identification in this study and Study 3 used the revised five item scale.

Table 8: Study 2: Invariance testing of independent and dependent variables

Model	$\chi^2$	df	p	CFI	RMSEA	RMSEA 90% CI	SRMR	$\Delta \chi^2$	$\Delta df$	$\Delta p$
Forgiveness										
Configural inv.	8.47	10	.583	1.00	.000	.000 .215	.040			
Weak inv.	23.16	22	.393	.99	.052	.000 .197	.300	14.69	14	.400
Strong inv.	34.71	34	.434	1.00	.033	.000 .167	.310	11.01	12	.528
American Identification (7 items)										
Configural inv.	218.27	70	<.001	.708	.325	.277 .375	.131			
Weak inv.	248.12	94	<.001	.697	.286	.243 .330	.244	29.85	24	.190
Strong inv.	277.67	118	<.001	.686	.260	.221 .300	.216	29.55	24	.200
American Identification (5 items)										
Configural inv.	26.26	25	.394	.99	.050	.000 .189	.059			
Weak inv.*	48.51	40	.167	.97	.103	.000 .195	.221	22.25	15	.101
Strong inv.	67.75	56	.135	.96	.102	.000 .181	.234	19.24	16	.257
Morality <sup>+</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	2.57	4	.632	1.00	.000	.000 .277	.177	2.57	4	.632
Strong inv.	4.77	8	.782	1.00	.000	.000 .176	.196	2.20	4	.699
Anger										
Configural inv.	31.41	10	.001	.94	.329	.203 .462	.052			
Weak inv.	42.17	22	.006	.94	.215	.113 .313	.120	10.76	12	.550
Strong inv.	52.87	34	.021	.95	.167	.067 .252	.122	10.70	12	.555
Disgust <sup>+</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	3.19	4	.527	1.00	.000	.000 .307	.213	3.19	4	.527
Strong inv.	5.42	8	.712	1.00	.000	.000 .199	.216	2.23	4	.694

\* The model also includes a residual covariance between items 6 and 7.

<sup>+</sup> Morality and disgust each had two indicators. As a result the configural invariance model is a saturated model and has perfect fit

## Main Effects

**Condition main effects.** Table 11 shows the means of all variables in each condition and the tests of condition main effects.

Table 9: Study 2: Means and test statistics for dependent and independent variables

DV	Guilt	Shame	Anger	Sympathy	No apology	$\chi^2$ difference test	<i>f</i>
Forgiveness	5.90	6.21	5.79	6.10	5.63	$\chi^2(4)=2.76, p=.599$	0.18
Morality	1.55	2.46	2.05	1.89	2.31	$\chi^2(4)=7.90, p=.096$	0.32
Anger	1.92	2.44	2.49	1.93	2.60	$\chi^2(4)=6.49, p=.165$	0.28
Disgust	2.04	2.41	2.53	1.97	2.61	$\chi^2(4)=5.29, p=.259$	0.26

There were no main effects of condition on any variables.

A possibility for the lack of main effects was a lack of power to detect effects. Power for the nested model test was assessed using a web calculator for testing the power of a nested model test (Preacher & Coffman, 2006). Power was low for the main effect of emotion condition on forgiveness (power=.15), morality (power=.27), anger (power=.21) and disgust (power=.06). The non-significant main effects of emotion condition may have been due to low power.

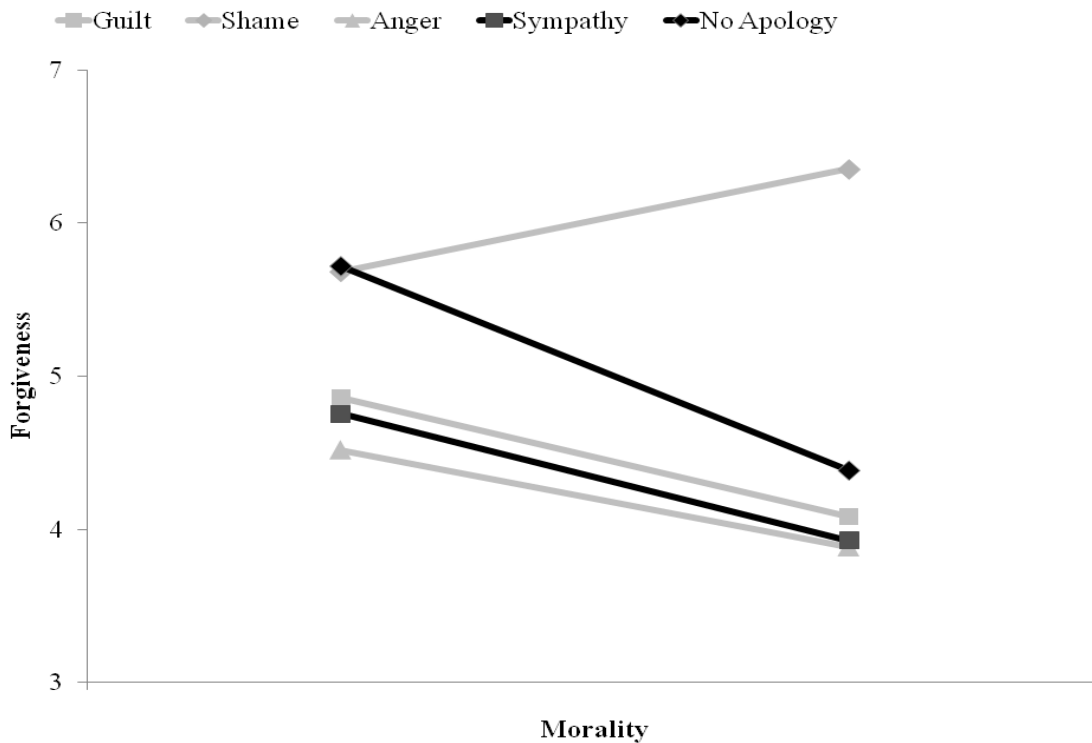
**Morality main effects.** There was a negative effect of morality on forgiveness,  $b=-.54$ ,  $se=.16$ ,  $p=.001$ . Morality was unrelated to anger,  $b=.08$ ,  $se=.09$ ,  $p=.383$ , or disgust felt toward the perpetrators,  $b=.04$ ,  $se=.08$ ,  $p=.630$ . As in Study 1, the more moral a group is perceived to be, the less likely the group is to be forgiven.

**Identification main effects.** Identification was negatively related to forgiveness,  $b=-.58$ ,  $se=.17$ ,  $p=.001$ , and positively related to anger,  $b=.53$ ,  $se=.17$ ,  $p=.002$ , and disgust,  $b=.45$ ,  $se=.13$ ,  $p<.001$ . As hypothesized, highly identified participants were less likely to forgive the Japanese and felt more negative emotions toward the Japanese.

### **Interactions with Morality**

I investigated whether morality moderated the relationship between condition and the dependent variables. I predicted that the content of apologies would have different meanings depending on how moral the perpetrator group was believed to be. Morality did not moderate the relationship between condition and anger,  $\chi^2(4)=1.85$ ,  $p=.763$ , or disgust,  $\chi^2(4)=1.19$ ,  $p=.751$ .<sup>14</sup> However, morality moderated the relationship between condition and forgiveness,  $\chi^2(4)=9.67$ ,  $p=.046$ . As in Study 1, morality was unrelated to forgiveness in the guilt, shame, and anger conditions, but it was negatively related to forgiveness in the sympathy and no apology conditions (see Figure 3).

Figure 3: Study 2: Interaction between morality and condition on forgiveness



As in Study 1, the slope of forgiveness on morality differed from zero in the sympathy,  $b=-.41$ ,  $se=.18$ ,  $p=.024$ , and no apology,  $b=-.63$ ,  $se=.12$ ,  $p<.001$ , conditions; simple slopes in the guilt, shame, and anger conditions were not significant.

### Interactions with American Identification

I investigated whether American identification moderated the relationship between condition and the dependent variables. I predicted that the content of apologies would have different meanings depending on how strongly participants identified with their group.

Identification did not moderate the relationship between condition and forgiveness,  $\chi^2(4)=6.15$ ,  $p=.188$ , anger,  $\chi^2(4)=6.80$ ,  $p=.147$ , or disgust,  $\chi^2(4)=3.87$ ,  $p=.424$ .

There were no interactions between identity and morality on forgiveness, anger or disgust, all  $ps>.10$ , and there were no three-way interactions between condition, identity and morality, all  $ps>.10$ .

## Discussion

There was no effect of an apology on forgiveness of perpetrators, and the specific emotion expressed while issuing the apology did not affect forgiveness. However, the perceived morality of the perpetrator group was negatively related to forgiveness; the more moral a perpetrator group was perceived to be, the less the perpetrators were forgiven. This effect was qualified by a morality by condition interaction. Participants who read an apology expressing sympathy or those who did not read about an apology were less likely to forgive perpetrators when they were not seen as moral. American identification was negatively related to forgiveness; highly identified Americans forgave the Japanese less than Americans low in identification. Surprisingly, identification did not moderate the effects of apology on forgiveness. This may be because highly identified participants were unwilling to forgive perpetrators of harm, no matter what apology perpetrators issued.

The context of the study may have influenced participant responses. The context of the Japanese attack on Pearl Harbor is a fairly unique one. Specifically, the victims of the initial harm later inflicted serious harm on the perpetrators: the dropping of two atomic bombs. Many participants may have already forgiven the Japanese for their attack on Pearl Harbor or they may have felt that the American attacks on Japan in World War II restored justice to America and an apology was not necessary. In Study 3 I investigated a conflict that is ongoing and does not have a history of the perpetrators of harm subsequently becoming victims. In addition, in Study 3 I attempted to determine the causal role of perpetrator morality by manipulating the morality of the perpetrator group.

## CHAPTER V: STUDY 3

The purpose of Study 3 is to further investigate how expressing different emotions in an apology and the morality of the perpetrator group affects victims' perceptions of perpetrator groups. In this study I used an ongoing conflict in which both groups have harmed each other. American participants identified as either supporters of the Democratic or Republican party and read about how the Republican (or Democratic) Party harmed the Democratic (or Republican) party. Participants then read one of four apologies from the perpetrators of harm or did not read about an apology. Finally, participants read about the perpetrators acting in a highly moral or highly immoral manner. Thus the design of the study was a 5 (Apology) X 2 (Morality) between subjects design. In this context I was able to measure ingroup identification as an additional possible moderator. Ingroup identification did not moderate any effects in Study 2, but the harm doing in Study 3 may be more subtle and identification may play a role as a moderator. I predicted that high identifiers will be less likely to forgive perpetrators and this effect should be stronger when perpetrators of harm have not apologized and when perpetrators are perceived to be immoral.

A final goal of Study 3 was to replicate the findings of Leonard and colleagues (2011). They found that while there was not a direct effect of an intergroup apology on forgiveness, apology had an indirect effect on forgiveness through respect for perpetrators. An intergroup apology increased respect for the perpetrators and respect increased forgiveness. I predict that an intergroup apology, especially one that includes a self-focused emotion, will increase respect for perpetrators and respect for perpetrators will increase forgiveness.



## Participants

Participants were introductory psychology students ( $N = 42$ ; 34 females) at the University of Kansas (KU) or community members ( $N = 197$ ; 98 females) sampled using Amazon Mechanical Turk (Mturk). Participants in the KU sample were split evenly across the two political parties (23 Democrats, 19 Republicans). The mean age of the student participants was 19.43 years ( $SD = 0.99$ ) and all participants were European Americans and United States citizens.

Amazon Mechanical Turk is an online marketplace where “workers” can complete tasks in exchange for compensation. Samples drawn from Mturk are more diverse than college student samples or other internet samples (Buhrmester, Kwang, & Gosling, 2011). Mturk “workers” are internally motivated and tend to complete tasks for enjoyment (Buhrmester et al., 2011).

Participants in the Mturk sample were paid \$0.50 for completing the study. The mean age of the Mturk participants was 33.99 years ( $SD = 12.44$ ,  $mdn = 30$ , Range = 18-81). There were more Democrats in the sample ( $N = 123$ ) than Republicans ( $N = 74$ ). Most of the community sample was employed full time ( $N = 90$ ) but some were students ( $N = 42$ ) or employed part time ( $N = 32$ ). A minority were unemployed ( $N = 17$ ) or stay at home parents ( $N = 18$ ). Participants were residents of 42 different states, with the most participants residing in Florida ( $N = 20$ ) and California ( $N = 19$ ). About half of the sample had at least a college education: 20 participants had a graduate degree, 76 had a bachelor’s degree, 22 had completed some college, 53 had a high school diploma, and 28 participants had completed some high school. The majority of the sample identified as a member of the middle class, with 10 participants identifying as working class, 67 participants identifying as lower middle class, 96 participants identifying as members of the middle class, 27 participants identifying as upper middle class, and 1 participant identifying as a member of the upper class. The sample was mostly European American ( $N = 142$ ), with 13

participants identifying as Hispanic, 11 participants identifying as African American, 26 participants identifying as Asian American, and 6 participants identifying their ethnicity as biracial or “mixed.” All participants were United States citizens.

### **Procedure and Materials**

Participants completed the study online. Participants first chose the party they identified most closely with: Democratic or Republican. The choice of party determined the remainder of the study. Participants who selected Democratic read about the Republican Party harming Democrats and participants who selected Republican read about the Democratic Party harming Republicans. Participants then completed a five item measure of political party identification (“Being a Democrat/Republican is an important reflection of who I am”) on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Participants were randomly assigned to read one of ten descriptions of conflict. For participants who identified as Democrats, each description began with:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Then participants read one of four apologies (participants in the no apology condition did not read anything in this space). The guilt conditions read:

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we regret the harm these actions caused the Democratic Party and we feel guilty about these actions.”

The shame conditions read:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel shame about the harm these actions caused the Democratic Party.”

The anger conditions read:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel anger about the harm these actions caused the Democratic Party.”

And the sympathy conditions read:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel sympathy for the harm experienced by the Democratic Party.”

Participants then read one of two descriptions of the morality of the Republican party. The low morality condition read “Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral,” and the high morality condition read “Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.” Participants who identified with the Republican party read one of the ten descriptions but with the names “Democrat” and “Republican” switched (so that the Democratic Party harmed Republicans and the Democratic Party was portrayed as moral or immoral).

After reading the description of harm and the two manipulations, participants responded to two manipulation checks. One manipulation check was focused on the emotion manipulation: “What emotion did the Republicans (Democrats) express?” Participants could choose between “*Anger*,” “*Guilt*,” “*Shame*,” “*Sympathy*,” or “*No Emotion*.” For the morality manipulation check, participants responded to the question “How moral is the Republican (Democratic) Party?” on a 1 (*Not at all moral*) to 7 (*Extremely moral*) scale.

Participants reported the emotions they felt toward the perpetrator group on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. These emotion items included the anger index (items: upset, morally outraged, irritated, angry) and disgust index (items: disgust, contempt) used in Studies 1 and 2. In Study 3, the emotion items also included a respect index (items: respect, admire). Next, participants responded to a four item forgiveness scale adapted from Wohl and

Branscombe (2005; e.g., “It is possible for me to forgive Republicans (Democrats) for the harm they caused Democrats (Republicans)”) on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Participants responded to a four item retribution scale. The first three items (e.g., “How much should the Republican (Democratic) Party be penalized for its past harm to Democrats (Republicans)?”) were rated on a seven point scale (e.g., 1 (*No Penalty*) to 7 (*High Penalty*)). The fourth item was a dichotomous item, “Should the actions taken by the Republican (Democratic) party be illegal?” with response options of “*Yes*” or “*No*”. Next, participants completed a three item scale concerning their expectancies about future harm (“Do you believe that the Democratic (Republican) Party will be victimized by the Republicans (Democrats) again?”) and a three item scale about the similarities between the political parties (“There really are no differences between the Republican and Democratic parties”). Both scales were rated on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale. Finally, participants reported demographic information.

## Results

Participants who completed the survey in less than 2 minutes were excluded from analysis. Pilot testing indicated that the minimum time to take the survey was four minutes and it was assumed that these participants did not read the manipulations or all of the questions (final  $N=223$ ). The excluded participants were not equally distributed across emotion conditions (Guilt  $N=1$ , Shame  $N=9$ , Anger  $N=4$ , Sympathy  $N=2$ , No apology  $N=0$ ),  $\chi^2(4)=15.88, p=.003$ , but the excluded participants were equally distributed across morality conditions (low morality  $N=9$ , high morality  $N=7$ ),  $\chi^2(1)=0.25, p=.617$ . All analyses were conducted using the SMM approach for the emotion independent variable and the MIMIC approach for the morality independent variable.<sup>15</sup> This allowed me to investigate whether the effect of morality changed

across the emotion conditions. For Study 3, the morality condition was a single dummy coded variable (0=low morality, 1=high morality). The emotion condition main effect and all interactions involving the emotion condition variable used a nested model test for significance. The morality main effect and the morality by party identification interaction were tested for significance using Wald tests of structural regression parameters. All continuous independent variables and all dependent variables were latent variables, with one exception. When investigating interactions between identification and morality condition and the three-way interaction between emotion condition, morality condition, and identification, party identification was a manifest variable to facilitate estimating the interaction. All latent variables and continuous independent variables were tested for invariance across both the emotion independent variable and the morality independent variable (see Tables 13, 14).

**Structural Equation Models.** All models used items as indicators of the latent variables. The number of indicators per latent variable was the number of items on each measure as described in the methods section. To test the main effect of emotion condition for all main effects and dependent variables two models were compared. One model estimated the mean of the latent variable estimated separately in each group, this model provided the estimates of condition means in Table 15. The second model constrained the means of the latent variable to equality across all groups. A nested model comparison between these two models provided the  $\chi^2$  statistic reported for each main effect. To test the main effect of morality, the dependent variable of interest was regressed on a variable representing morality condition (0=not moral, 1=moral) and the effect of morality on the dependent variable was constrained to equality across groups. To test the main effect of identification, the dependent variable of interest was regressed

on identification and the effect of identification on the dependent variable was constrained to equality across groups.

To test the interaction between emotion condition and morality or identification, two models were compared. One model was the model used to assess the main effect of morality or identification. The other model regressed the dependent variable on morality or identification and the effect of morality or identification on the dependent variable was free to vary across groups. A nested model comparison between a model with the effect of morality or identification on the dependent variable constrained to equality across groups and a model with the effect of morality or identification on the dependent variable freely estimated across groups provided the  $\chi^2$  statistic reported for each interaction. Significant interactions were probed by investigating the effect of morality or identification on the dependent variable within each emotion condition.

To test the interaction between morality and identification, a product term was computed to represent the interaction. Then, morality, identification and the product term were regressed on the dependent variable of interest. In the model testing the interaction between morality and identification, the effects of morality and identification on the dependent variable were free to vary across levels of the emotion condition, but the effect of the product term was constrained to equality across groups. Finally, to test the three-way interaction of emotion condition, morality condition and identification a model was run with the effects of morality, identification and their product term free to vary across levels of the emotion condition. A nested model comparison between this model and the model assessing the interaction between identification and morality provided the  $\chi^2$  statistic reported for each three-way interaction.

## Manipulation Checks

**Morality manipulation check.** The morality manipulation check revealed a significant main effect of morality,  $b=.39$ ,  $se=.19$ ,  $p=.039$ ,  $d=0.20$ , with participants in the high moral condition rating perpetrators as more moral ( $M=3.10$ ) than participants in the low moral condition ( $M=2.71$ ). There was not a significant main effect of emotion condition,  $\chi^2(4)=4.07$ ,  $p=.396$ , or an interaction between morality and emotion condition,  $\chi^2(4)=3.19$ ,  $p=.526$  on the morality manipulation check.

**Emotion manipulation check.** The emotion manipulation check did not differ across the emotion conditions. If all participants responded to the emotion manipulation check correctly, all participants would be represented on the diagonal of Table 12. Many participants in different conditions incorrectly selected the emotion perpetrators expressed. The failure of this manipulation check is similar to the manipulation check failures in Study 1 and Study 2. It is likely that for lay individuals the meanings of these emotions are very similar and participants will easily misidentify what emotion was specified. However, in all three studies, the experimental condition influenced participants' responses. Whereas participants may not be able to recall the exact emotion expressed in an apology, expressing different emotions in an apology can still have different consequences for victims and perpetrators.

Table 10: Study 3: Emotion manipulation checks.

	Guilt (N=43)	Shame (N=34)	Anger (N=50)	Sympathy (N=46)	No Apology (N=48)
Guilt	15	17	3	2	7
Shame	6	16	8	1	3
Anger	10	31	5	2	2
Sympathy	8	10	4	18	7
No Apology	6	7	14	3	18

Rows represent the experimental condition to which participants were assigned and columns represent participants' responses on the manipulation check. Each cell contains a count of the number of participants in a condition who selected a specific response.

### **Invariance Testing**

All dependent variables and moderators were tested for metric invariance across both emotion and morality conditions (see Tables 13, 14). Variables were tested for configural, weak, and strong invariance across emotion conditions. In order to meet the assumptions of the MIMIC approach, variables were tested for configural invariance, weak invariance, strong invariance, and equality of variances across morality conditions. All variables passed the test of strong invariance across emotion conditions and all variables passed the tests of strong invariance and equality of variances across morality conditions.



Table 11: Study 3: Invariance across emotion conditions

Model	$\chi^2$	df	p	CFI	RMSEA	RMSEA 90% CI	SRMR	$\Delta \chi^2$	$\Delta df$	$\Delta p$
Identification										
Configural inv.	54.47	25	.001	.97	.163	.103 .222	.022			
Weak inv.	77.25	41	.001	.97	.141	.091 .189	.131	22.76	16	.120
Strong inv.	90.14	57	.003	.97	.114	.066 .157	.145	12.89	16	.681
Forgiveness										
Configural inv.	13.74	10	.185	.99	.092	.000 .199	.043			
Weak inv.*	33.36	21	.042	.96	.115	.022 .185	.144	19.62	11	.051
Strong inv.	40.95	33	.161	.97	.073	.000 .139	.164	7.59	11	.816
Respect <sup>+++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	4.98	4	.289	.99	.074	.000 .249	.133	4.98	4	.289
Strong inv.	9.42	8	.308	.99	.063	.000 .194	.140	4.44	4	.350
Anger										
Configural inv.	17.44	10	.065	.98	.129	.000 .228	.040			
Weak inv.**	35.51	21	.025	.96	.125	.045 .194	.138	18.07	11	.080
Strong inv.	45.00	33	.080	.96	.090	.000 .152	.152	9.49	12	.661
Disgust <sup>+++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	5.98	4	.200	.95	.106	.000 .268	.170	5.98	4	.200
Strong inv.	7.77	8	.457	1.00	.000	.000 .173	.175	1.79	4	.774
Retribution <sup>***</sup>										
Configural inv.	5.61	10	.847	1.00	.000	.000 .092	---			
Weak inv.	20.11	22	.576	1.00	.000	.000 .113	---	13.30	12	.348
Strong inv. <sup>+</sup>	28.02	30	.569	1.00	.000	.000 .104	---	8.00	8	.434
Similarity <sup>++++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	9.24	8	.32	1.00	.059	.000 .192	.075	9.24	8	.320
Strong inv.	15.18	16	.512	1.00	.000	.000 .132	.083	5.94	8	.654
Expectancy <sup>++++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv. <sup>++</sup>	8.60	7	.283	.99	.072	.000 .207	.087	8.60	7	.283
Strong inv.	21.33	15	.127	.96	.098	.000 .185	.147	12.73	8	.121

\*Forgiveness reached partial weak invariance. The loading of item Forgive 4 is free in the anger condition.

\*\* Anger reached partial weak invariance. The loading of item 'irritated' is free in the guilt condition.

\*\*\* The item retribution 4 was a dichotomous item. All models involving retribution use a weighted least squares estimator. The SRMR is not available using this estimator.

<sup>+</sup> In order to identify the model, the threshold for retribution 4 was constrained to equality across all models.

<sup>++</sup> Expectancies reached partial weak invariance. The loading of item Expectancy 2 is free in the no apology condition.

<sup>+++</sup> Disgust and respect each had two indicators. As a result the configural invariance model is a saturated model and has perfect fit

<sup>++++</sup> Similarity and expectancy each had three indicators. As a result the configural invariance model is a saturated model and has perfect fit

Table 12: Study 3: Invariance across morality conditions

Model	$\chi^2$	df	p	CFI	RMSEA	RMSEA 90% CI	SRMR	$\Delta\chi^2$	$\Delta df$	$\Delta p$
Identification										
Configural inv.	20.21	10	.027	.99	.096	.031 .156	.016			
Weak inv.	23.08	14	.059	.99	.076	.000 .130	.048	2.87	4	.580
Strong inv.	29.05	18	.048	.99	.074	.008 .122	.062	5.97	4	.201
Equal Variance	29.95	19	.053	.99	.072	.000 .119	.098	0.90	1	.343
Forgiveness										
Configural inv.	5.57	4	.234	.99	.059	.000 .164	.022			
Weak inv.	8.01	7	.332	1.00	.036	.000 .126	.051	2.44	3	.486
Strong inv.	14.73	10	.142	.98	.065	.000 .131	.073	6.72	3	.081
Equal Variance	15.32	11	.168	.98	.059	.000 .124	.088	0.59	1	.442
Respect <sup>++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	1.31	1	.253	1.00	.052	.000 .265	.067	1.31	1	.253
Strong inv.*	1.38	2	.502	1.00	.000	.000 .169	.067	0.07	1	.719
Anger										
Configural inv.	4.05	4	.399	1.00	.011	.000 .144	.018			
Weak inv.	10.55	7	.159	.99	.068	.000 .146	.078	6.50	3	.090
Strong inv.	14.94	10	.134	.98	.067	.000 .132	.079	4.39	3	.222
Equal Variance	15.04	11	.181	.99	.058	.000 .123	.082	0.10	1	.752
Disgust <sup>++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	1.25	1	.263	.99	.048	.000 .262	.073	1.25	1	.263
Strong inv.	1.41	2	.495	1.00	.000	.000 .170	.073	0.16	1	.689
Retribution <sup>**</sup>										
Configural inv.	2.13	4	.713	1.00	.000	.000 .106	---			
Weak inv.	5.31	7	.622	1.00	.000	.000 .098	---	3.38	3	.337
Strong inv. <sup>+</sup>	7.04	9	.633	1.00	.000	.000 .089	---	2.20	2	.333
Equal Variance	10.93	10	.363	.99	.029	.000 .110	---	2.67	1	.102
Similarity <sup>+++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	2.95	2	.229	1.00	.065	.000 .211	.045	2.95	2	.229
Strong inv.	6.00	4	.200	1.00	.067	.000 .170	.038	3.05	2	.218
Equal Variance	6.54	5	.257	1.00	.053	.000 .150	.063	0.54	1	.462
Expectancy <sup>+++</sup>										
Configural inv.	0.00	0	---	1.00	.000	---	.000			
Weak inv.	0.29	2	.865	1.00	.000	.000 .204	.019	0.29	2	.865
Strong inv.	2.73	4	.604	1.00	.000	.000 .155	.039	2.44	2	.295
Equal Variance	3.26	5	.666	1.00	.000	.000 .131	.059	0.53	1	.467

\*Respect and disgust have two items so equal variance is assumed across all groups and is not tested separately.

\*\*The item retribution 4 was a dichotomous item. All models involving retribution use a weighted least squares estimator. The SRMR is not available using this estimator.

<sup>+</sup> In order to identify the model, the threshold for retribution 4 was constrained to equality across all models.

<sup>++</sup> Disgust and respect have two indicators. To identify the model the variance of the latent variable is constrained to equality across groups in all models.

<sup>+++</sup> Morality and disgust each had two indicators. As a result the configural invariance model is a saturated model and has perfect fit

<sup>++++</sup> Similarity and expectancy each had three indicators. As a result the configural invariance model is a saturated model and has perfect fit

## Main Effects

**Condition main effect.** Table 15 shows the means of all variables in each emotion condition and the tests of significance for the main effects. There were no significant main effects of emotion condition on any dependent variable.

Table 13: Study 3: Means and test statistics for dependent variables across emotion condition

DV	Guilt	Shame	Anger	Sympathy	No apology	$\chi^2$ difference test	<i>f</i>
Forgiveness	4.34	3.96	4.59	4.48	4.35	$\chi^2 (4)=6.63, p=.157$	0.25
Respect	1.68	1.94	1.90	1.89	1.96	$\chi^2 (4)=1.75, p=.782$	0.10
Anger	3.73	4.08	3.87	3.87	3.90	$\chi^2 (4)=2.96, p=.565$	0.12
Disgust	5.31	5.56	5.51	5.14	5.44	$\chi^2 (4)=2.66, p=.616$	0.15
Retribution*	0.00	-0.01	-0.12	-0.30	-0.20	$\chi^2 (4)=3.02, p=.554$	0.12
Similarity	1.94	1.61	2.02	1.69	1.79	$\chi^2 (4)=5.72, p=.221$	0.17
Expectancy	5.16	5.46	5.29	5.08	5.08	$\chi^2 (4)=3.28, p=.512$	0.14

\* The retribution dependent variable had both categorical and continuous variables. The effects coding method of identification for means is not available with this approach. Means were identified by fixing the mean of the first category to 0.

A possibility for the lack of main effects was a lack of power to detect effects. Power for the nested model test was assessed using a web calculator for testing the power of a nested model test (Preacher & Coffman, 2006). Power was low for the main effect of emotion condition on forgiveness (power=.51), respect (power=.74), disgust (power=.06), retribution (power=.06), and similarity (power=.32). Power was high for the main effect of emotion condition on anger (power=.95) and expectancy (power=.99). The non-significant main effects of emotion condition on forgiveness, respect, disgust retribution and similarity may have been due to low power.

**Morality main effect.** Table 16 shows the means of all variables in each morality condition and the tests of main effects. There was a main effect of morality condition on

forgiveness with participants in the high moral condition being more likely to forgive perpetrators than participants in the low morality condition. There were no significant main effects of morality on any other dependent variable.

Table 14: Study 3: Means and test statistics for dependent variables across morality condition

DV	Low Moral	High Moral	Test statistic	<i>d</i>
Forgiveness	4.30	4.62	$b=.32, se=.15, p=.032$	.32
Respect	1.78	1.96	$b=.18, se=.15, p=.240$	.18
Anger	3.88	3.86	$b=-.02, se=.13, p=.850$	.02
Disgust	5.39	5.28	$b=-.11, se=.18, p=.552$	.11
Retribution	0.00	0.01	$b=.01, se=.13, p=.945$	.01
Similarity	1.81	1.77	$b=-.04, se=.13, p=.775$	.04
Expectancy	5.49	5.31	$b=-.28, se=.16, p=.085$	.28

\* The retribution dependent variable had both categorical and continuous variables. The effects coding method of identification for means is not available with this approach. Means were identified by fixing the mean of the first category to 0.

**Identification main effect.** The main effect of identification on forgiveness,  $b=-.02, se=.06, p=.807$ , respect,  $b=-.06, se=.08, p=.482$ , disgust,  $b=.18, se=.09, p=.053$ , or expectancies,  $b=.09, se=.08, p=.253$ , was not significant. Identification was positively related to anger at perpetrators,  $b=.24, se=.07, p=.001$ , desire for retribution,  $b=.24, se=.06, p<.001$  and negatively related to similarity,  $b=-.65, se=.09, p<.001$ . Highly identified party members were angrier at perpetrators, had a stronger desire for retribution, and believed the parties were less similar than party members low in identification.

### Interactions

There was not a significant interaction between emotion condition and morality condition on forgiveness,  $\chi^2(4)=5.05, p=.282$ , respect,  $\chi^2(4)=3.12, p=.539$ , anger,  $\chi^2(4)=6.30, p=.178$ ,

disgust  $\chi^2(4)=2.97, p=.562$ , retribution,  $\chi^2(4)=2.64, p=.861$ , similarity,  $\chi^2(4)=2.64, p=.861$ , similarity,  $\chi^2(4)=7.42, p=.115$ , or expectancies,  $\chi^2(4)=1.74, p=.783$ .

There was a significant emotion type by identification interaction on forgiveness  $\chi^2(4)=14.85, p=.005$ ; however, this effect was qualified by a three-way interaction between emotion type, morality, and party identification. There was not an emotion type by identification interaction on respect  $\chi^2(4)=7.67, p=.104$ , anger  $\chi^2(4)=2.24, p=.692$ , disgust,  $\chi^2(4)=0.67, p=.995$ , retribution,  $\chi^2(4)=4.18, p=.382$ , similarity,  $\chi^2(4)=3.12, p=.540$ , or expectancies,  $\chi^2(4)=4.65, p=.325$ .<sup>16</sup> There was not a morality condition by identification on forgiveness,  $b=.14, se=.12, p=.230$ , respect,  $b=.04, se=.12, p=.742$ , anger,  $b=.07, se=.11, p=.523$ , disgust,  $b=.14, se=.08, p=.100$ , retribution,  $b=-.10, se=.12, p=.390$ , similarity,  $b=.19, se=.11, p=.105$ , or expectancies,  $b=.05, se=.12, p=.677$ .

There was a three-way emotion type by morality condition by identification interaction on forgiveness  $\chi^2(4)=17.64, p=.001$ . Simple intercepts and slopes are presented in Table 17. Probing the three-way interaction reveals significant two way interactions between morality condition and identification in the guilt, shame and no apology conditions. In the guilt condition, morality was unrelated to forgiveness for participants low in party identification and morality was positively related to forgiveness for highly identified participants. When perpetrators were perceived as immoral and they expressed guilt in their apologies, highly identified participants were less likely to forgive perpetrators than low identified perpetrators. In the shame condition, morality was unrelated to forgiveness for low identifiers, and morality was negatively related to forgiveness for high identifiers. When perpetrators were perceived as moral and they expressed shame in their apologies, highly identified participants were less likely to forgive the perpetrators than were low identified participants. In the no apology condition, morality was negatively

related to forgiveness in low identifiers and morality was positively related to forgiveness for high identifiers. When perpetrators were perceived as moral and they did not express an apology, highly identified participants were more likely to forgive perpetrators than low identified participants.

Table 15: Study 3: Simple intercepts and slopes of morality for the emotion condition by morality by identification interaction on forgiveness.

	Condition	Simple Intercept	Simple Slope
Guilt	Low Identification	5.39	0.14
Guilt	High Identification	3.40	1.84*
Shame	Low Identification	4.10	0.81
Shame	High Identification	5.01	-1.24*
Anger	Low Identification	4.73	0.35
Anger	High Identification	5.44	0.31
Sympathy	Low Identification	4.87	0.51
Sympathy	High Identification	4.51	0.72
No Apology	Low Identification	5.10	-0.49
No Apology	High Identification	4.70	0.62

\*  $p < .05$

There was a three-way emotion type by morality condition by identification interaction on respect  $\chi^2(4)=18.96, p=.001$ . Simple intercepts and slopes are presented in Table 18. Probing the three-way interaction reveals significant two way interactions between morality condition and identification in the guilt, shame and anger conditions. In the guilt condition, morality was unrelated to respect for participants low in party identification and morality was positively related to respect for highly identified participants. When perpetrators were perceived as immoral and they expressed guilt in their apologies, highly identified participants were less

likely to respect perpetrators than low identified perpetrators. In the shame condition, morality was unrelated to respect for low identifiers, and morality was negatively related to respect for high identifiers. When perpetrators were perceived as moral and they expressed shame in their apologies, highly identified participants were less likely to respect the perpetrators than were low identified participants. In the anger condition, morality was unrelated to respect for participants low in party identification and morality was positively related to respect for highly identified participants. When perpetrators were perceived as immoral and they expressed anger in their apologies, highly identified participants were less likely to respect perpetrators than low identified participants.

Table 16: Study 3: Simple intercepts and slopes of morality for the emotion condition by morality by identification interaction on respect.

	Condition	Simple Intercept	Simple Slope
Guilt	Low Identification	1.78	-0.01
Guilt	High Identification	1.40	1.23*
Shame	Low Identification	1.28	0.79
Shame	High Identification	3.43	-1.65*
Anger	Low Identification	2.64	-0.40
Anger	High Identification	1.47	1.23*
Sympathy	Low Identification	2.07	0.55
Sympathy	High Identification	1.98	-0.51
No Apology	Low Identification	2.11	0.08
No Apology	High Identification	1.89	0.58

\*  $p < .05$

There was not a significant three-way interaction on anger,  $\chi^2(4)=4.38, p=.358$ , disgust,  $\chi^2(4)=6.52, p=.164$ , retribution,  $\chi^2(4)=3.24, p=.519$ , or similarity,  $\chi^2(4)=2.94, p=.567$ . There

was a significant three-way interaction on expectancies for future behavior,  $\chi^2(4)=9.88$ ,  $p=.042$ . Simple slopes and intercepts are presented in Table 18. For high identifiers in the guilt condition, morality was negatively related to expectancies for future harm. When perpetrators expressed guilt, high identifiers expected greater harm from immoral groups than from moral groups. For low identifiers in the shame and sympathy conditions, morality was negatively related to expectancies for future harm. When perpetrators expressed shame or sympathy, low identifiers expected greater harm from immoral groups than from moral groups. In addition, in both the shame and sympathy conditions, high identifiers did not differ in their expectancies for future harm across levels of morality.

Table 17: Study 3: Simple intercepts and slopes of morality for the emotion by morality by identification interaction on expectancies.

Condition		Simple Intercept	Simple Slope
Guilt	Low Identification	5.51	-0.15
Guilt	High Identification	6.17	-1.02*
Shame	Low Identification	6.33	-1.13*
Shame	High Identification	5.79	0.55
Anger	Low Identification	5.89	-0.31
Anger	High Identification	5.75	-0.55
Sympathy	Low Identification	5.79	-0.75*
Sympathy	High Identification	5.44	0.32
No Apology	Low Identification	5.01	0.81
No Apology	High Identification	5.68	-0.41

\*  $p<.10$



## Mediation Analysis

I tested the conditional indirect effect of respect on the relationship between the morality of a perpetrator group and forgiveness of the perpetrator group at different levels of the emotion condition and identification. Respect was positively related to forgiveness in the shame condition,  $b=.54$ ,  $se=.19$ ,  $p=.005$ . Respect did not predict forgiveness in any other condition: guilt,  $b=-.09$ ,  $se=.33$ ,  $p=.789$ , anger,  $b=-.10$ ,  $se=.35$ ,  $p=.779$ , sympathy  $b=.07$ ,  $se=.20$ ,  $p=.717$ , and no apology,  $b=.04$ ,  $se=.18$ ,  $p=.805$ . Bootstrapped confidence intervals, from 5000 bootstrapped samples, of the indirect effect for each level of the emotion condition and identification are presented in Table 19. Respect did not mediate the relationship between morality and forgiveness in any condition tested.

Table 18: Study 3: Bootstrap confidence intervals for the indirect effect of respect on the relationship between morality and forgiveness at different levels of emotion condition and identification.

Condition		95% CI LL	95% CI UL
Guilt	Low Identification	-1.10	0.94
Guilt	High Identification	-0.27	0.30
Shame	Low Identification	-2.53	0.07
Shame	High Identification	-0.50	1.33
Anger	Low Identification	-1.63	0.61
Anger	High Identification	-0.20	0.75
Sympathy	Low Identification	-0.58	0.13
Sympathy	High Identification	-0.18	0.67
No Apology	Low Identification	-0.18	0.57
No Apology	High Identification	-0.18	0.28

## Discussion

There was no effect of the emotion expressed in an apology on forgiveness of perpetrators. Moral perpetrators were forgiven more than perpetrators who were not moral; however this effect was qualified by an emotion condition by morality condition by party identification three-way interaction. Neither emotion condition nor the morality of perpetrators affected respect. There was an emotion condition by morality condition by party identification three-way interaction on respect. The conditional indirect effect of respect on the morality and forgiveness relationship was not significant. Therefore, this study failed to replicate the mediating effect of respect found by Leonard et al. (2011). There was no effect of an apology on expectancies for future harm, and the morality of the perpetrators did not affect expectancies for future harm. There was an emotion condition by morality condition by party identification three-way interaction on expectancies for future harm. Party identification was positively related to anger at perpetrators and desire for retribution. High identifiers were angrier at the perpetrators of harm and had more desire for retribution than low identifiers. Party identification was negatively related to similarity between the political parties. High identifiers believed that the two parties were less similar than low identifiers. Neither emotion condition, morality condition, identification, nor any of their interactions predicted disgust.

When perpetrators expressed guilt and participants were high on identification, morality was positively related to forgiveness. Perpetrators who expressed guilt in an apology and are perceived as low in morality may be seen as sending conflicting messages. Perpetrators who express guilt are taking responsibility for their actions and should be forgiven, whereas perpetrators who are immoral may be likely to harm victims again and should not be forgiven. When given these two pieces of conflicting information, highly identified members of the victim

group may focus on or weigh mostly heavily the information that paints the perpetrators in a negative light. In this case, highly identified members of the victim group focused on the immorality of the perpetrators and not on their expression of guilt. By focusing on the immorality of the perpetrators, highly identified individuals are less likely to forgive the perpetrators compared to low identified individuals.

When perpetrators expressed shame and perpetrators were perceived to be high in morality, identification was negatively related to forgiveness. This condition is another example of communicating mixed messages in an apology. Perpetrators who express shame are expressing a negative evaluation of their group. Thus, shame may lead to less forgiveness because perpetrators are saying they are bad and may not be trustworthy. However perpetrators who are moral are unlikely to harm victims again and should be forgiven. When given the two conflicting pieces of information, highly identified individuals may use the information that portrays the perpetrators negatively, in this case the expression of shame. By focusing on the negative aspects of perpetrator actions, highly identified individuals are less likely to forgive perpetrators than are low identified individuals who may focus on more positive aspects of the apology.

An unexpected result was that when perpetrators did not express an apology and perpetrators were high in morality, identification was positively related to forgiveness. When the perpetrators of harm are moral then forgiving them will demonstrate that the victim group is also a moral group. Highly identified members of a group want their group to be perceived as good and moral (Riketta, 2005), and forgiving a moral perpetrator group may well establish the victim group's moral credentials. For group members who are low in identification, the morality of their

group is not as important (Riketta, 2005) and they are less likely to forgive perpetrators, even if the perpetrators are highly moral.

When perpetrators expressed guilt and participants were high on identification, morality was positively related to respect. Perpetrators who expressed guilt in an apology and are perceived as low in morality may be seen as sending conflicting messages. Perpetrators who express guilt are taking responsibility for their actions and should be respected, whereas perpetrators who are immoral are likely to harm victims again and should not be respected. When given these two pieces of conflicting information, highly identified members of the victim group may focus on the information that casts the perpetrators in a negative light. In this case, highly identified members of the victim group focused on the immorality of the perpetrators and not on their expression of guilt. By focusing on the immorality of the perpetrators, highly identified individuals are less likely to respect the perpetrators compared to low identified individuals.

When perpetrators expressed anger and participants were high on identification, morality was positively related to respect. Perpetrators who expressed anger in an apology and are perceived as low in morality may also be seen as sending conflicting messages. Perpetrators who express anger are stating that their actions are unfair and the perpetrators should be respected, whereas perpetrators who are immoral are likely to harm victims again and should not be respected. When given these two pieces of conflicting information, highly identified members of the victim group may focus on the information that casts the perpetrators in a negative light. In this case, highly identified members of the victim group focused on the immorality of the perpetrators and not on their expression of anger. By focusing on the immorality of the

perpetrators, highly identified individuals are less likely to respect the perpetrators compared to low identified individuals.

When perpetrators expressed shame and perpetrators were perceived to be high in morality, identification was negatively related to respect. This condition is another example of communicating mixed messages in an apology. Perpetrators who express shame are expressing a negative evaluation of their group. Thus shame may lead to less respect because perpetrators are saying they are bad and may not be trustworthy. However perpetrators who are moral are unlikely to harm victims again and should be respected. When given the two conflicting pieces of information, highly identified individuals may use the information that portrays the perpetrators negatively, in this case the expression of shame. By focusing on the negative aspects of perpetrator actions, highly identified individuals are less likely to respect perpetrators than are low identified individuals who may focus on more positive aspects of the apology.

Expectancies about the future behavior of the perpetrator group were also predicted by the interaction of emotion condition, morality condition, and party identification. Highly identified participants who read about a perpetrator group that expressed guilt expected immoral perpetrators to engage in harm again more than when the perpetrators were perceived as moral. Highly identified group members are motivated to see their group in a positive light, and when their group has been victimized there are two possibilities they must consider. One possibility is that the perpetrator group will not harm their group again and thus their group will not be victimized further in the future. This is inviting for highly identified group members as it limits the harm done to their group and it will raise their group's status from a low status victimized group to a high status group. The other possibility is that the perpetrator group may harm the victims again, and the group must guard against that possibility. When perpetrators express guilt

in an apology and are a moral group, then victimized group members can be fairly sure that they will not be victimized again and highly identified group members expect less future harm. The other emotions expressed by perpetrators do not communicate that the perpetrators are a moral group as clearly as guilt. When emotions other than guilt are expressed, group members may not know if future harm will occur or not and the morality of the perpetrator group does not matter.

When group members are not strongly identified with their group and the perpetrators express shame or sympathy, moral groups are viewed as less likely to engage in future harm than immoral groups. Low identifiers do not feel particularly connected to the group and may not be concerned about the future of the group. Thus, they may be making their judgments about future harm on the basis of the perpetrator group's morality, more than the emotion expressed. As long as the perpetrators have issued an apology, low identifiers are content to base their judgments about future harm on the morality of the perpetrator group, with more moral groups engaging in less future harm. When the perpetrator group has not issued an apology low identifiers may believe that moral groups may be more likely to engage in future harm. A moral group should apologize for the harm it has caused. Low identifiers may perceive that if a moral group has not taken the step of apologizing for their actions then they may not have finished harming the victim group.

The results from Study 3 are markedly different from the results in Studies 1 and 2. Unlike Study 1 or Study 2, there was no interaction between the emotion expressed in an apology and the morality of perpetrators on forgiveness. There are several possible reasons for the differences observed across the studies. In Studies 1 and 2, morality was measured, not manipulated, and morality was a subjective construct that each participant constructed themselves, whereas in Study 3, morality was manipulated and stated with assurance. Perhaps

the effect of the morality manipulation was too strong and swamped the effects of the emotion content in Study 3.

Another possible explanation for the differences obtained across the three studies is the context of the harm doing. In Studies 1 and 2 the harm had relatively little direct impact on participants. In both studies harm was in the past and the participants were not directly affected by the perpetrators. However, in Study 3 the context of harm was more relevant to the victims: the harm occurred in the present day and may have been seen as directly affecting the participants. In this situation, the probability of the perpetrators engaging in future harm is quite high and highly identified ingroup members will be unlikely to forgive perpetrators if they believe there is a chance of future harm. Thus, ingroup identification is an important factor that affects how individuals respond to apologies by perpetrators. In contrast, in Study 2 there was a very small chance that the perpetrators of harm would engage in harm again and ingroup identification did not play a critical role.

In addition, in Study 3, both groups had harmed one another; there was not a clear-cut victim and perpetrator group. Group identification also plays a role in how members of each group view their roles. Highly identified group members are likely to view themselves as victims while simultaneously downplaying their roles as perpetrators compared to low identifiers. By not acknowledging that both groups have harmed each other, highly identified individuals are less likely to forgive perpetrators of harm. The dynamics of apology and forgiveness are more complex when conflict is recent and both groups have harmed each other, a concept I will discuss further in the general discussion.

## CHAPTER VII: General Discussion

In three studies I investigated how perpetrators' expressions of emotion in an intergroup apology affect a victim group's forgiveness. I used SEM to analyze data in all three studies and using SEM allowed me to model measurement error in the dependent variables and obtain a more precise estimate of constructs. Across all three studies, there the main effect of perpetrators' expressions of emotions on the victim group's forgiveness was not significant. The lack of a main effect may be explained by low power to test the main effect; especially in Studies 2 and 3. Perceived perpetrator morality played a moderating role in the relationship between the emotion expressed in an apology and forgiveness. In Studies 1 and 2, morality was negatively related to forgiveness when perpetrators expressed sympathy in their apology or when no apology was given. Participants expect moral perpetrators to take responsibility for their actions and by expressing sympathy or not apologizing perpetrators are not seen as taking responsibility for their actions. Consequently, they are not forgiven. When perpetrators expressed the self-focused emotions of guilt, shame or anger, perpetrator morality was unrelated to forgiveness. Perpetrators who express a self-focused emotion take responsibility for their harm regardless of their morality, thus when perpetrators expressed a self-focused emotion, forgiveness does not differ as a function of morality.

In Study 3, group identification, perpetrator morality, and the emotion expressed by perpetrators interacted to predict forgiveness and respect. When perpetrators expressed guilt, high identifiers were more likely to forgive and had more respect for moral perpetrators than for immoral perpetrators. However, when perpetrators expressed shame, high identifiers were more likely to forgive and had more respect for immoral perpetrators than for moral perpetrators. One possible explanation for these differing results is that highly identified individuals are searching



for negative information about the perpetrators of harm when deciding about whether to respect and forgive the perpetrators or not. When highly identified victims find negative information in the form of either low morality or expression of an emotion that reflects a negative view of the ingroup (shame), then they are less likely to respect and forgive the perpetrators.<sup>17</sup>

Another possible explanation for these results concerns the consistency between the emotion expressed and the perpetrators' morality. When perpetrators express guilt they are taking responsibility and acting in a moral manner. If an immoral group expresses guilt then how the group acts and what the group expresses in the apology is inconsistent. Similarly, when perpetrators express shame, they are admitting that they have acted immorally and that they feel badly about their immorality. If a moral group expresses shame then how the group acts and what is said in its apology are inconsistent. When groups behave inconsistently, highly identified members of the victim group may not respect the perpetrator group and, for this reason, may be unwilling to forgive the perpetrators of harm.<sup>18</sup>

This consistency explanation can also explain the results from Studies 1 and 2. In these studies, victims were less likely to forgive moral perpetrators who expressed sympathy or perpetrators who did not apologize compared to immoral perpetrators. If a moral group does not take responsibility for their actions, by not apologizing or expressing sympathy, there is inconsistency between the perpetrators' morality and their actions (in the form of an apology or lack thereof). If an immoral group does not take responsibility for their actions, then the perpetrators' morality and their actions are consistent. When perpetrators behave in a manner consistent with their morality, forgiveness is more likely.<sup>19</sup>

The results from these studies provide an important step forward in the understanding of intergroup apologies. The consistency between victims' views of perpetrators and the emotion

perpetrators expressed in an apology emerged as an important factor in eliciting forgiveness from an apology. Inconsistency between victims' perceptions of perpetrators and the perpetrator group's apology in previous research may explain the lack of findings in those studies (e.g., Philpot & Hornsey, 2008). When victims are presented with a simple apology with no further information about the perpetrator group's motivations and behavior (as was the case in Philpot & Hornsey, 2008) then forgiveness is unrelated to an apology. In this situation there is not enough information for victims to determine if the apology is consistent with the perpetrator's other actions and the apology does not affect forgiveness. The results from Leonard and colleagues (2011) and Wohl and colleagues (in press a) can also be explained by the consistency between victims' perceptions of the perpetrator group and what the perpetrators express in an apology.

Leonard and colleagues found that an apology resulted in forgiveness when the ingroup had taken action and responded to the perpetrators of harm. By issuing an apology after the victim group has responded to harm, the perpetrators demonstrated that they were paying attention to the victim group and they are responsive to the needs of the victim group. In this situation, the perpetrators are likely to be seen as caring about the victims, so an apology is consistent with victims' perceptions of perpetrators and forgiveness increased. Wohl and colleagues (in press a) found that when victims dehumanized perpetrators, and perpetrators expressed an apology, forgiveness was inhibited. In this situation, victims' perceptions of perpetrators were inconsistent with the perpetrators' actions and forgiveness decreased.

The results from the current research also differed from previous research in important ways. I was unable to replicate the indirect effect of respect on the apology-forgiveness relationship that Leonard et al. (2011) found. The main reason for the lack of mediation was that respect was unrelated to forgiveness in all but one emotion condition (when perpetrators

expressed shame). The conflict investigated in Study 3, conflict between political parties, differed from the conflict investigated by Leonard et al. (2011), conflict between students and faculty at a university. In addition, Leonard et al. (2011) investigated a single instance of harm whereas Study 3 investigated a conflict with multiple instances of harm. It may be that when harm is an isolated instance respect for the perpetrator group increases forgiveness but when harm is pervasive then respect for the outgroup is unrelated to forgiveness. Unlike the findings from Wohl and colleagues (in press a), I did not find decreased forgiveness when perpetrators expressed a primary emotion (anger) relative to when perpetrators expressed a secondary emotions (guilt, shame). This may be because the self-focused anger perpetrators expressed in all three studies is perceived to be a secondary, uniquely human, emotion rather than a primary emotion. Given the importance of self-focused anger in intergroup relations, future research should address how perpetrator groups' expressions of self-focused anger influence victims' perceptions of perpetrator groups' humanity.

### **Differences among Studies**

Similar results were obtained in Studies 1 and 2 but the results for Study 3 differed from those of the first two studies. There are several possible explanations for the differences between studies and these potentially have important consequences for policy and future research. In the discussion of Study 3, I noted two possible reasons for these differences: differences in how morality was measured and differences in the nature of the conflict between the groups. In Study 1 and Study 2, morality was measured whereas in Study 3 morality was manipulated. How participants define morality, their *standards of immorality*, may have differed between Studies 1 and 2 and Study 3. Presenting participants with concrete evidence of perpetrators' morality or immorality in Study 3 may have changed, or shifted, participants' standards of immorality.

Shifting standards, specifically standards of injustice, can help illuminate how members of perpetrator groups respond to harm doing (Miron, Branscombe, & Biernat, 2010). Standards of injustice dictate how individuals define what is and is not an injustice. Members of perpetrator groups with high standards of injustice are less likely to define their own harm doing as unjust and are therefore less likely to feel guilt about it. Furthermore, when members of perpetrator groups are motivated to deny or justify their past harm, they shift their standards of injustice upwards. In Studies 1 and 2, participants may have shifted their *standards of immorality* when judging the perpetrators of harm. Standards of immorality dictate how individuals define what is and is not an immoral person or group. Higher standards of immorality make it harder to define an individual or a group as immoral. It is possible that expressing different emotions in an apology resulted in members of victim groups shifting their standards of immorality. Use of different standards of immorality could explain why morality has an effect in the shame and guilt conditions in Study 3, but not in Studies 1 and 2. In Studies 1 and 2 participants were given no information about the morality of the perpetrators. Thus, each participant used his or her standards of immorality to determine the morality of the perpetrator group. In Study 3, participants read about the morality of the perpetrator group, and based their judgments of the perpetrators' morality on what they read, not their individual standards of immorality. In Studies 1 and 2, when the perpetrator group expressed guilt in an apology, they took responsibility for their actions and this may have raised standards of immorality. If the perpetrator group expresses guilt it implies that the perpetrators are moral and the perpetrator group's other actions should conform to this higher standard of immorality. With higher standards of immorality, it is harder to define the perpetrators as immoral and individual participants in the guilt condition would each give similar ratings of the perpetrator's morality, thus reducing the variance of morality in

the guilt condition and making it difficult to observe an effect of morality on forgiveness in the guilt condition. Similarly, by expressing shame in an apology the perpetrator group is expressing a negative view of themselves and this may lower standards of immorality. If the perpetrator group expresses shame it implies that the perpetrators are immoral and the perpetrator group's other actions should conform to this lower standard of morality. With lower standards of immorality it is easier to define the perpetrators as immoral and individual participants in the shame condition would give similar ratings of the perpetrator's morality, reducing the variance of morality in the shame condition and making it difficult to observe an effect of morality on forgiveness in the shame condition. Future research should investigate the role standards of immorality play in victim willingness to forgive perpetrators and how expressing emotions in apologies affects the standard of morality used.

An important difference between Studies 1 and 2 and Study 3 was the context of intergroup harm. In Studies 1 and 2 the conflict between the groups may not have had a strong impact on participants. The conflict was either imaginary (Study 1) or decades ago (Study 2), whereas the conflict in Study 3 occurred in the present and may have been highly relevant to participants. When harm is recent, the chances of the perpetrators engaging in future harm may be high and highly identified ingroup members will be unlikely to forgive perpetrators if they believe there is a chance of future harm. Thus, ingroup identification is an important component, along with the content of the apology and the morality of perpetrators, in how individuals respond to apologies by perpetrators. In contrast, in Study 2, which focused on harm done by the Japanese at Pearl Harbor in 1941, there was a very small chance that the perpetrators of harm would engage in harm again and ingroup identification did not play a critical role.

Another difference between the studies was that in Study 3 the perpetrator and victim group had both repeatedly harmed each other and were locked in a form of intractable conflict. Intractable conflicts are protracted group conflicts that are seen by both groups as unresolvable and zero-sum in nature (Bar-Tal, 2000). Examples of intractable conflicts include the Israeli-Palestinian conflict and the conflict in Northern Ireland. The conflict between political parties in the United States has not included the violence seen in other intractable conflicts; nonetheless, the conflict between political parties may be viewed as unresolvable and zero-sum in nature. Highly identified members of each political party may be especially likely to view the conflict between groups in a zero-sum fashion. This is an empirical question that should be addressed in future research. Future research into American political parties and intractable conflict should also address how viewing the conflict between political parties as intractable affects forgiveness of the other party.

Bar-Tal (2000) argues that to transition from intractable conflict to reconciliation members of both groups need to change their beliefs about the conflict in which their group is engaged. If highly identified group members are resistant to changing their beliefs about the intergroup conflict, then they will be less likely to forgive perpetrators of harm. Noor and colleagues (2008) found that, in the context of intractable conflicts, highly identified group members are less likely to forgive perpetrators of harm than are low identifiers. Thus, group identification may play an especially important role in forgiveness in intractable conflicts but intergroup apologies may also play a role in eliciting forgiveness in intractable conflicts. Intergroup apologies have occurred in intractable conflict (e.g., the IRA has apologized for some of the events they perpetrated during the time known as “the troubles” (IRA apology, 2002)) and

future research should address how apologies affect perceived morality and forgiveness in intractable conflicts.

### **Implications for Policy**

The results from these three studies have important implications for public policy and how relations between groups can be improved. For perpetrators of harm, the timing of harm (recent vs. long ago) and whether they are perceived as a moral group or not has consequences for how to issue an effective apology. Most apologies for intergroup harm occur long after the harm occurred (e.g., the United States government's apology for its role in the enslavement of African-Americans in 2009 (CNN Politics, June 2009)). In this case, perpetrators of harm should express a self-focused emotion such as guilt, shame, or anger in their apology. If perpetrators of harm are perceived to be moral and express an other-focused emotion such as sympathy, then they may be less likely to be forgiven by victims than if they are perceived to be immoral.

If harm is recent and/or part of an intractable conflict, perpetrators should tailor their apology taking into account the effects it will have on highly identified members of the victim group. If the perpetrator group is viewed as moral, then the perpetrators should express guilt in their apology to ensure forgiveness from highly identified members of the victim group. If the perpetrator group is viewed as immoral then the perpetrators should express shame in their apology to ensure forgiveness from highly identified members of the victim group. In this situation it is important for the perpetrators of harm to carefully assess how their group's morality is likely to be perceived by victims.

### **Limitations and Future Directions**

There are several limitations to the current set of studies. One limitation is the limited power to test the effect of emotion expressed in an apology. Future studies on expressing

emotion in an apology should attempt to increase sample sizes to avoid this issue. In addition, there are several interesting future directions for research into analyzing experimental data with SEM. One area for future research is in how to analyze data from factorial designs with SEM. In this study I utilized a hybrid SMM-MIMIC technique, and this technique should be compared to a fully MIMIC approach to determine if there are any advantages to the hybrid technique. In addition, future research should address how factorial designs can be analyzed using only the SMM approach.

Another limitation is that none of the victim groups were true low status groups. Low status groups often have been the victims of harm repeatedly over a long period of time (e.g., African Americans). In these studies, harm occurred once (Study 2) over a short period of time (Study 1), or both groups engaged in harm against each other (Studies 2 and 3). Members of low status groups may be more likely to believe that their group will be harmed again and be therefore less likely to forgive perpetrators. Future research should address how perpetrator expression of emotion in apologies affects forgiveness among members of historically victimized groups.

An important limitation to consider is that the manipulation checks for the emotion variables failed across all three studies. One reason for this failure may be that for lay individuals the definitions of the emotions are very similar and participants misremembered what emotion was specified. It is also possible, however, that the events described were not strong enough to elicit much emotion in participants. Despite the failure of the manipulation checks, the emotion condition to which participants were assigned did affect participants' forgiveness through interactions with morality (Study 1, 2, and 3) and group identification (Study 3). Therefore, it seems that participants were affected by the emotion manipulation accompanying the apology,



which had consequences for victim forgiveness. In future research, manipulation checks should assess the concepts communicated by each emotion, not simply the emotion itself. For example, a manipulation check for guilt might ask whether perpetrators took responsibility for their actions, whereas a manipulation check for shame could ask if perpetrators view their group negatively.

A final limitation to consider is that none of the studies compared an apology expressing an emotion to an apology that does not express an emotion. Thus it is unclear whether expressing an emotion in an apology provides any *additional* benefits over expressing an emotion without an explicit apology. When perpetrators issue an apology without an emotion, victims may attempt to infer the emotion that perpetrators may be experiencing. Different individuals may infer different emotions from an apology that does not explicitly express an emotion and responses to the apology may vary as a function of the emotion inferred. Future research should investigate the emotions victims infer from an apology and victim responses to an apology without an emotion made explicit in order to determine whether victim responses differ to an apology that expresses a self-focused or other-focused emotion.

The three studies I presented suggest several profitable avenues for future research. In particular, these studies provide a foundation for two lines of future research, one investigating standards of morality and one investigating apologies in intractable conflicts. Standards of morality are used to determine the perceived morality of perpetrators, and the morality of perpetrators plays an important role in victims' forgiveness. Future research should investigate the factors that influence the setting of standards of morality. Both individual (e.g., group identification) and contextual (e.g., when harm occurred) factors are likely to affect standards of morality.

The relationship between apology and forgiveness in intractable conflicts may differ from the relationship in other conflicts. In intractable conflicts, both groups have harmed one another, and if an apology from one group results in forgiveness then the other group may feel obliged to issue an apology. For example, imagine two groups, Group A and Group B, are involved in an intractable conflict. If Group A apologizes to Group B and Group B forgives Group A, then Group B may be motivated to apologize to Group A as well (and Group B may expect Group A to forgive them as well). Future research should investigate if an apology from one group in an intractable conflict can elicit forgiveness and if that forgiveness in turn can result in another apology.

## **Conclusions**

Three studies examined how expressing different emotions in an apology for intergroup harm affects forgiveness of the perpetrators. When harm was in the past or did not have a strong impact on the victims, perpetrators who were perceived as moral and who expressed sympathy or did not apologize were less likely to be forgiven than perpetrators who were perceived as immoral. When perpetrators expressed self-focused emotions, moral and immoral perpetrators did not differ in their levels of forgiveness. When harm was recent and participants were invested in the conflict, a different pattern of results emerged. Highly identified victims were less likely to forgive immoral perpetrators who expressed guilt than moral perpetrators and high identifiers were less likely to forgive moral perpetrators who expressed shame than immoral perpetrators. Across all the studies, inconsistency between perceived perpetrator morality and moral information contained in the apology resulted in decreased forgiveness. Expressing an emotion while apologizing can have important consequences for intergroup forgiveness and reconciliation, especially if the emotion is appropriate for the context.

Notes:

<sup>1</sup> In the matrix expression of SEM I chose to use only “Y-side” matrices as this is a simpler expression of SEM and yields identical results as when X and Y side matrices are considered.

<sup>2</sup> Typically  $\eta$  represents latent variables. In the case of dummy variables, each dummy variable can be expressed as a single indicator of a latent variable, thus the dummy variables in equation 4 can be represented using  $\eta$ .

<sup>3</sup> The MIMIC technique can be used to test for measurement invariance of item intercepts (strong factorial invariance). However, with continuous indicators it cannot be used to assess invariance of factor loadings (weak factorial invariance) or invariance of factor variance or covariances.

<sup>4</sup> As in ANOVA or regression, which variable is used as X and which variable is used as Z will not affect the significance of the interaction. However, when using the hybrid SMM/MIMIC technique there are a few points to consider regarding interpretation. Interpreting simple slopes is generally easier when the categorical IV with the fewest levels is the IV that is dummy coded (e.g., in a 2 X 3 design, the variable with 2 levels is dummy coded and the variable with 3 levels is used as the grouping variable).

<sup>5</sup> Many popular SEM software packages (e.g., Mplus, LISREL) provide the  $R^2$  value for dependent variables directly.

<sup>6</sup> While the General Linear Model assumes that variables are continuous, the *Generalized* Linear Model can be used to analyze experimental data that are categorical. There are also robust analogs to the GLM that can handle non-normal data. The advantage of the SEM approach is that all types of data are easily included in one method.

<sup>7</sup> There were no main effects or interactions with participant gender.

<sup>8</sup> There were no significant differences when testing for mean differences within condition (e.g., participants in the guilt condition did not differ on their ratings of guilt, shame, anger or sympathy).

<sup>9</sup> Power for all significance tests for interactions was greater than .82.

<sup>10</sup> All data for Study 2 were collected before the Japanese earthquake and tsunami which took place on March 13, 2011.

<sup>11</sup> There were no main effects or interactions with participant gender.

<sup>12</sup> Models that included continuous independent variables did not converge, likely due to a combination of the sample size and the larger number of parameters required to estimate these models.

<sup>13</sup> There were no significant differences when testing for mean differences within condition (e.g., participants in the guilt condition did not differ on their ratings of guilt, shame, anger, or sympathy).

<sup>14</sup> Power for all significance tests for interactions was greater than .85.

<sup>15</sup> There were no main effects or interactions with participant gender, sample type, or party membership.

<sup>16</sup> Power for all significance tests for interactions was greater than .80.

<sup>17</sup> One concern with this explanation is that I did not find similar effects with anger. If this interpretation is correct, anger may show a similar pattern as guilt. However, the anger condition had the lowest proportion of correct responses to the manipulation check (most participants believed the perpetrators expressed either shame or anger).

<sup>18</sup> This explanation assumes that respect mediates the relationship between an apology and forgiveness. However, I did not find evidence of mediation in Study 3. In addition, this

explanation does not explain the lack of results in the sympathy condition, especially given the results from Studies 1 and 2.

<sup>19</sup> This explanation does not explain the lack of results in the guilt condition, a topic I address in the section on differences between studies.

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Appendix A: Sample *Mplus* scripts

TITLE: Condition main effects of forgiveness, Study 1

DATA: FILE IS groupXsem.csv;

VARIABLE: NAMES ARE

COND manipG manipS manipA manipSy

humanitarian moral

forgive1 forgive2 forgive3 forgive4

irritated Upset MoralOut angry

contempt disgusted ;

!Select forgiveness variables for analysis

USEV are forgive1-forgive4;

!Specify variable that denotes different groups

GROUPING IS cond (1=guilt 2=shame 3=anger 4=symp 5=noap);

MISSING ARE ALL (-999);

MODEL:

!Factor loadings (constrained to equality across groups)

forgive by forgive1\* (L1);

forgive by forgive2 (L2);

forgive by forgive3 (L3)

forgive by forgive4 (L4);

!Latent variance (freely estimated across groups)

forgive;

!Item intercepts (constrained to equality across groups)

[forgive1] (M1);

[forgive2] (M2);

[forgive3] (M3);

[forgive4] (M4);

!Latent means (freely estimated across groups)

[forgive] ;

!Latent means (constrained to equality across groups)

![forgive] (ME);

MODEL CONSTRAINT:

!Effects coding method of identification for means

0 = M1+M2+M3+M4;

!Effects coding method of identification for variances

L1 = 4-L1-L2-L3;

OUTPUT: STANDARDIZED; SAMPSTAT; TECH1;

TITLE: Condition by morality interaction on forgiveness, Study 1

DATA: FILE IS groupXsem.csv;

VARIABLE: NAMES ARE  
 COND manipG manipS manipA manipSy  
 humanitarian moral  
 forgive1 forgive2 forgive3 forgive4  
 irritated Upset MoralOut angry  
 contempt disgusted ;

!Select forgiveness variables for analysis  
 USEV are moral humanitarian forgive1-forgive4;

GROUPING IS cond (1=guilt 2=shame 3=anger 4=symp 5=noap);  
 MISSING ARE ALL (-999);

ANALYSIS: ESTIMATOR IS ML;

MODEL:  
 !Factor loadings (constrained to equality across groups)  
 forgive by forgive1\* (L1);  
 forgive by forgive2 (L2);  
 forgive by forgive3 (L3)  
 forgive by forgive4 (L4);

!Latent variance (freely estimated across groups)  
 forgive;

!Item intercepts (constrained to equality across groups)  
 [forgive1] (M1);  
 [forgive2] (M2);  
 [forgive3] (M3);  
 [forgive4] (M4);

!Latent means (constrained to equality across groups)  
 ![forgive] (ME1);

!Factor loading constrained to equality for identification  
 mor by moral\* humanitarian (e) ;

!Factor variance fixed to 1 across groups for identification  
 mor@1;

!Item intercepts (constrained to equality across groups)  
 [moral\*] (M3); [humanitarian] (M4);

!Latent means (constrained to equality across groups)  
 [mor] (ME2);

!Create phantom variable to scale forgiveness across groups  
phan by;

#### MODEL GUILT:

!Regress forgiveness on phantom variable to scale the latent variable  
Forgive on phan;

!Regress the phantom variable on morality to assess the main effect of  
!morality (regression coefficient is constrained to equality across  
!groups) or the condition by morality interaction (regression  
!coefficient is freely estimated across groups)  
phan on mor;

#### MODEL SHAME:

!Regress forgiveness on phantom variable to scale the latent variable  
Forgive on phan;

!Regress the phantom variable on morality  
phan on mor;

#### MODEL ANGER:

!Regress forgiveness on phantom variable to scale the latent variable  
Forgive on phan;

!Regress the phantom variable on morality  
phan on mor;

#### MODEL SYMP:

!Regress forgiveness on phantom variable to scale the latent variable  
Forgive on phan;

!Regress the phantom variable on morality  
phan on mor;

#### MODEL NOAP:

!Regress forgiveness on phantom variable to scale the latent variable  
Forgive on phan;

!Regress the phantom variable on morality  
phan on mor;

#### MODEL CONSTRAINT:

!Effects coding method of identification for means  
 $0 = M1 + M2 + M3 + M4;$   
 $0 = M3 + M4;$

!Effects coding method of identification for variances  
 $L1 = 4 - L1 - L2 - L3;$

OUTPUT: STANDARDIZED; SAMPSTAT; TECH1;

## Appendix B: Materials used in Studies 1, 2, and 3

### Study 1: Descriptions

#### **GUILT**

Please imagine the following situation:

You are a member of group X. In the past group X has been the victims of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group x (your group). Recently, a spokesperson for group Y made the following public statement.

“As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel guilt about the harm done to group X.”

#### **SHAME**

Please imagine the following situation:

You are a member of group X. In the past group X has been the victims of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group x (your group). Recently, a spokesperson for group Y made the following public statement.

“As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel ashamed of the harm done to group X.”

#### **ANGER**

Please imagine the following situation:

You are a member of group X. In the past group X has been the victims of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group x (your group). Recently, a spokesperson for group Y made the following public statement.

“As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel anger about the harm done to group X.”

#### **EMPATHY**

Please imagine the following situation:

You are a member of group X. In the past group X has been the victims of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group x (your group). Recently, a spokesperson for group Y made the following public statement.

“As a representative of group Y, I would like express my apology for our actions toward group X. As a group we feel sympathy for the suffering group X.”

## NO APPOLOGY

Please imagine the following situation:

You are a member of group X. In the past group X has been the victims of intentional harm by group Y. The harm caused by group Y has caused financial loss and suffering to group x (your group).

### Study 1: Dependent Variables

For the following questions please tell us about your impressions of **Group Y** by circling the number that best reflects your opinion.

<b>Humanitarian</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Moral</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree

Using the scales below, please indicate the degree to which **you are feeling at this moment the following emotions toward GROUP Y. (Please click on the number that best reflects your feelings):**

<b>Disgust</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Irritated</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Contemptuous</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Upset</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Morally outraged</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Angry</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree

For the following questions please circle the number that best reflects your opinion.

1. Members of Group Y today should be forgiven for what their group did to Members of Group X

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree						strongly agree

2. Members of Group X should move past their negative feelings toward today's Members of Group Y for the harm their group inflicted

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree						strongly agree

3. Today's Members of Group Y should be forgiven for what their ancestors did to Members of Group X

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree						strongly agree

4. It is possible for me to forgive today's Members of Group Y for the harm they caused Group X

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree						strongly agree

## **Study 2: Descriptions**

### **GUILT**

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearly Harbor without warning. This attacked killed over 2,400 Americans and wounded more than 1,300. As the prime minister of Japan I would like to apologize for all Japanese for the harm done to American in the Pearly Harbor attack. As a nation we feel guilt about the harm done to America in the attack.”

### **SHAME**

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearly Harbor without warning. This attacked killed over 2,400 Americans and wounded more than 1,300. As the prime minister of Japan I would like to apologize for all Japanese for the harm done to American in the Pearly Harbor attack. As a nation we feel ashamed of the harm done to America in the attack.”

### **ANGER**

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearly Harbor without warning. This attacked killed over 2,400 Americans and wounded more than 1,300. As the prime minister of Japan I would like to apologize for all Japanese for the harm done to American in the Pearly Harbor attack. As a nation we feel anger about the harm done to America in the attack.”

### **EMPATHY**

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearly Harbor without warning. This attacked killed over 2,400 Americans and wounded more than 1,300. As the prime minister of Japan I would like to apologize for all Japanese for the harm done to American in the Pearly Harbor attack. As a nation we feel sympathy for the suffering Americans due to the attack.”

### **NO APPOLOGY**

On December 7, 1941 planes from the Japanese navy attacked the American Naval base at Pearl Harbor, Hawaii.

Please imagine the following situation:

Recently, the Prime Minister of Japan, Naoto Kan made the following public statement.

“On December 7, 1941 the forces of Japan attacked American naval forces at Pearly Harbor without warning. This attacked killed over 2,400 Americans and wounded more than 1,300.”

## Study 2: Identification Scale and dependent variables

### American Identification scale

1. I often think of myself in terms of being an American.

1 2 3 4 5 6 7  
strongly disagree strongly agree

2. Being an American is an important reflection of who I am.

1 2 3 4 5 6 7  
strongly disagree strongly agree

\*3. In general, being an American is an important part of my self-image.

1 2 3 4 5 6 7  
strongly disagree strongly agree

4. I value being an American.

1 2 3 4 5 6 7  
strongly disagree strongly agree

\*5. I am proud to be an American.

1 2 3 4 5 6 7  
strongly disagree strongly agree

6. I like being an American.

1 2 3 4 5 6 7  
strongly disagree strongly agree

7. I believe that being an American is a positive experience.

1 2 3 4 5 6 7  
strongly disagree strongly agree

\* These items were excluded from all analyses.

### Dependent Variables:

For the following questions please tell us about your impressions of **The Japanese** by circling the number that best reflects your opinion.

<b>Humanitarian</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree
<b>Moral</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree

Using the scales below, please indicate the degree to which **you are feeling at this moment the following emotions toward THE JAPANESE.** (Please click on the number that best reflects your feelings):

<b>Disgust</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree
<b>Irritated</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree
<b>Contemptuous</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree
<b>Upset</b>	strongly disagree	1	2	3	4	5	6	7 strongly agree



<b>Morally outraged</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Angry</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree

For the following questions please circle the number that best reflects your opinion.

1. Japanese today should be forgiven for what their group did to Americans.

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree			strongly agree			

2. Americans should move past their negative feelings toward today's Japanese for the harm their group inflicted .

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree			strongly agree			

3. Today's Japanese should be forgiven for what their ancestors did to Americans

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree			strongly agree			

4. It is possible for me to forgive today's Japanese for the harm they caused Americans.

<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b>
strongly disagree			strongly agree			

### **Study 3: Descriptions (for Democrats)**

#### **HIGH MORAL GUILT**

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we regret the harm these actions caused the Democratic Party and we feel guilty about these actions.”

Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.

#### **LOW MORAL GUILT**

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we regret the harm these actions caused the Democratic Party and we feel guilty about these actions.”

Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral.

#### **HIGH MORAL ANGER**

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel anger about the harm these actions caused the Democratic Party.”

Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.

#### LOW MORAL ANGER

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel anger about the harm these actions caused the Democratic Party.”

Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral.

#### HIGH MORAL SHAME

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel shame about the harm these actions caused the Democratic Party.”

Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.

#### LOW MORAL SHAME

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel shame about the harm these actions caused the Democratic Party.”

Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral.

#### HIGH MORAL SYMPATHY

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel sympathy for the harm experienced by the Democratic Party.”

Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.

#### LOW MORAL SYMPATHY

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Recently, a high ranking member of the Republican National Committee issued the following statement:

“As a representative of the Republican Party, I would like to apologize for our actions during electoral cycles. As a group, we feel sympathy for the harm experienced by the Democratic Party.”

Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral.

#### HIGH MORAL NO APOLOGY

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Independent reporters have described the modern day Republican Party as honorable, ethical, and moral.

#### LOW MORAL NO APOLOGY

Please imagine the following situation:

Throughout the past two decades Republican operatives have engaged in extensive election fraud, causing great harm to the Democratic Party. This fraud includes vote fixing, biased vote counting, and threatening and harassing of Democratic voters.

Independent reporters have described the modern day Republican Party as dishonorable, unethical, and immoral.

### Study 3: Identification Scale and dependent variables (for Democrats)

Which political party do you identify *most* closely with (please pick one)

\_\_\_\_ Democratic Party

\_\_\_\_ Republican Party

### Democratic Party Identification scale

1. I often think of myself in terms of being a Democrat.

1 2 3 4 5 6 7  
strongly disagree strongly agree

2. Being a Democrat is an important reflection of who I am.

1 2 3 4 5 6 7  
strongly disagree strongly agree

3. I value being a Democrat.

1 2 3 4 5 6 7  
strongly disagree strongly agree

4. I like being a Democrat.

1 2 3 4 5 6 7  
strongly disagree strongly agree

5. I believe that being a Democrat is a positive experience.

1 2 3 4 5 6 7 8

strongly disagree strongly agree

## MANIPULATION CHECKS

Which of the following emotions did the head of the Republican National Committee express?

\_\_\_ Anger

\_\_\_\_\_ Guilt

\_\_\_\_\_ Shame

\_\_\_\_ Sympathy

\_\_\_ No emotion

How moral is the Republican Party?

*Not moral*    1       2       3       4       5       6       7       *very moral*

## FORGIVENESS

1. Republicans today should be forgiven for what their group did to the Democratic Party in the past.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

2. Members of the Democratic Party should move past their negative feelings toward today's Republicans for the harm their group inflicted in the past.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

3. Today's Republicans should be forgiven for what their predecessors did to the Democratic Party.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

4. It is possible for me to forgive today's Republicans for the harm they caused the Democratic Party.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

Using the scales below, please indicate how you felt when you read about what the Republicans had done  
(Please click on the number that best reflects your feelings):

<b>Disgust</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Respect</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Irritated</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Contemptuous</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Admiration</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Morally outraged</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree
<b>Angry</b>	strongly disagree	<b>1</b>	2	3	<b>4</b>	5	6	<b>7</b> strongly agree

## RETRIBUTION

1. To what extent do you think the Republican Party should be fined or penalized for its past harm to Democrats?

*Not at all*    1       2       3       4       5       6       7       *Extremely*

2. How much should the Republican Party be penalized for its past harm to Democrats?

*No Penalty*    1       2       3       4       5       6       7       *High Penalty*

3. How much should the Republican Party be fined for its past harm to Democrats?

*No Fine*    1       2       3       4       5       6       7       *High Fine*

4. Should the actions committed by the Republican Party be illegal?

\_\_\_\_ Yes

\_\_\_\_ No

### EXPECTENCIES FOR FUTURE HARM

1. Do you believe that the Republican Party will harm Democrats again?

*Not at all*    1       2       3       4       5       6       7       *Very much*

2. Do you believe that the Republican Party will peacefully coexist with Democrats?

*Not at all*    1       2       3       4       5       6       7       *Very much*

3. Do you believe that the Democratic Party will be victimized by the Republicans again?

*Not likely*    1       2       3       4       5       6       7       *Very Likely*

### SIMILARITY

Please click the response that represents how you feel about the following statements.

1. The Republican and Democratic parties are very similar.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

2. Republican and Democratic Party member are alike.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*

3. There really are no differences between the Republican and Democratic parties.

*Strongly Disagree*    1       2       3       4       5       6       7       *Strongly Agree*